552-010

MAR 3 1 2004

Bill Arthur - Deputy National Field Director Sierra Club 180 Nickerson St., Suite 202 Seattle, WA 98109

----Original Message----

From: Bill Arthur [mailto:billa@drizzle.com] Sent: Wednesday, March 31, 2004 10:22 AM

To: Taves, John - DR-7-C;

Subject: RE: Summer Spill Proposal - This is It

John,

Please convey my dismay and disgust with the proposal to eliminate spill by the federal action agencies to the leadership of the agencies. I am not surprised by the decision. It merely continues a 30 year plus history of balancing BPA's power books, and failures of policy and leadership on other issues that have really cost the region financially (WPPSS, abandoning its world class conservation program in the 1990's etc.) on the backs of the salmon.

There is a reason why the ancient forest issue spun out of control in the region and ultimately was settled in the courts and with the help of the rest of the country who had a vested interest and concern in their public resource. It was the failure of the relevant agencies, the USFS and BLM, to follow the science and the law, and for the agencies and NW political leaders to provide leadership for changing the way we do business and building a solution for the future.

BPA and the rest of the "action" agencies have demonstrated, again, that you have neither the willingness or ability to buck the entrenched interests and really develop and implement a plan that will protect and restore our salmon, and help transition our communities and region toward a future that works for all of us, and meets our legal, treaty, and moral responsibilities. BPA and the region are making it impossible to lay claim that we are fit to manage and enjoy the substantial benefits this region enjoys from our hyro system unfettered by interference from the rest of the country. BPA and the region have a duty, both legal and moral, to manage the system for the full range of public values and benefits, including salmon.

When the rest of the country continues to wade into the Northwest's troubled salmon waters to protect it's legitimate national interests in its public resources and values, because our own leaders and agencies won't - please remember today and the proposed decision as a milestone in the unraveling of the NW energy dynasty that I believe will eventually occur(and for cause).

I think the region will ultimately pay a very high price for the short-term and very modest economic gain this action, and the pattern of action and inaction it represents. The relentless pursuit of the cheapest KWH at the expense of all else is illusory and may ultimately

March 25, 2004

**DOUGLAS**ELECTRIC COOPERATIVE

Steve Wright Bonneville Power Administration P.O. Box 3621 Portland, OR 97208

1981 N.E. Stephens • P.O. Box 1327 Roseburg, Oregon 97470 541.673-6616 541.672-0863 fax

Dear Mr. Wright:

Attached please find a resolution passed by the Board of Douglas Electric Cooperative, (Roseburg) regarding an important issue impacting customers of the Bonneville Power Administration (BPA).

Our resolution calls for a reasoned approach to Columbia and Snake River salmon recovery. We support alternatives to summer spill that would return more fish to our rivers while preserving needed hydropower generation. This salmon restoration strategy could save ratepayers \$77 million dollars, add 50,000 adult salmon and help protect jobs throughout the Northwest.

Currently, the Bonneville Power Administration (BPA) spends more than \$600 million a year on fish and wildlife programs, half of which is related to river operations and dams. The most costly – and least effective – of those efforts is called "summer spill". Recent federal studies show that BPA expects to spend \$77 million per year to save 19,000 fish, with only 24 of those from a run listed under the Endangered Species Act as "threatened".

The good news is there are more effective ways to save salmon at a fraction of the cost. For example, two alternatives identified by river managers could save more than 50,000 additional salmon a year for between \$1 and \$2 million.

Rather than blindly continue a costly and ineffective strategy, we are urging the U. S. Army Corps of Engineers, BPA and NOAA Fisheries to eliminate or reduce summer spill in those cases where science shows that more effective alternatives exist.

We ask your support in that effort and look forward to working with you to increase salmon and jobs throughout the Northwest.

Sincerely,

**DOUGLAS ELECTRIC COOPERATIVE** 

Dave Sabala General Manager

Attachment



## DOUGLAS ELECTRIC COOPERATIVE ROSEBURG, OREGON

#### **RESOLUTION NO. 429**

## **Resolution Regarding River Operations for Fish**

WHEREAS, Douglas Electric Cooperative, Inc. is a member-owned electric distribution cooperative whose primary mission is to provide safe, reliable and economical electric service to its member/owners in Douglas Electric Cooperative;

WHEREAS, Douglas Electric Cooperative relies upon generation from the Federal Columbia River Power System for power supply, and recognizes that availability of power generation and the cost of that generation is dramatically affected by the operation of the river system;

WHEREAS, recent studies by the Bonneville Power Administration, the Army Corps of Engineers and NOAA Fisheries show that attempting to flush juvenile fish downstream by spilling water over the dams in summer provides almost no benefit to threatened fish and only marginal benefit to healthy runs of fish, and averages almost 3000 megawatt-months of lost generation at an average cost to ratepayers of \$77 million;

WHEREAS, the above-listed federal agencies outlined alternatives to spill that would increase adult salmon returns by 50,000 fish at a cost of approximately one to two million dollars;

## NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

- 1. Douglas Electric Cooperative urges the federal river managers immediately to take all actions necessary to put in place alternatives that allow elimination of summer spills this year and provide substantial benefits to fish and to ratepayers;
- 2. Douglas Electric Cooperative urges the Governor to support alternatives to summer spill, and to instruct state agencies to assist with implementation of those options;
- 3. Douglas Electric Cooperative requests members of congress to urge federal hydropower system operators to immediately implement alternatives to summer spill.

IN WITNESS WHEREOF, I have set my hand and affixed the seal of Douglas Electric Cooperative, Inc. this 17<sup>th</sup> day of March, 2004.

Shirling a. Causas

(CORPORATE SEAL)

result in higher power and the loss of the NW "special deal", and the institutions that provide it.

But with BPA enthusiastically reclaiming the mantle of the Broken Promises Administration on behalf of the region there seems little to prevent us all from going down that road.

This isn't a summer spill proposal. It is the summer salmon sellout initiative.

Bill

# LOWER COLUMBIA RIVER ESTUARY PARTNERSHIP

April 6, 2004

Communications DM-7 P.O. Box 14428 Portland, Oregon 97293-4428 SS2-051 APR 07 2004

Submitted via Fax: 503.230-3285

RE: Comment to Preliminary Proposal for Federal Columbia River Power System Summer Juvenile Bypass Spill Operations proposed by Bonneville Power Administration and the US Army Corps of Engineers

On behalf of the Lower Columbia River Estuary Partnership (Estuary Partnership), I have reviewed the Preliminary Proposal for Federal Columbia River Power System Summer Juvenile Bypass Spill Operations and offer the following comments. My comments are focused on the discussion in Section II of the March 30, 2004 proposal that addresses habitat protection and improvement to habitat that could benefit juvenile and adult salmon.

The Estuary Partnership works in five specific areas to: increase habitat and habitat functions; improve land use practices to protect ecosystems; enhance education opportunities and provide information about the lower river and estuary to build stewardship; improve coordination among multi-jurisdictions and interests; and reduce conventional and toxic pollutants. From 1996 through 1999, the Estuary Partnership developed the first two state Comprehensive Conservation and Management Plan to address degradation in the lower 146 miles of the Columbia River.

The Estuary Partnership Management Plan contains three major objectives for the Estuary Partnership. Germane to the Spill Operations proposal, one of those areas of emphasis is habitat restoration and land use. The Management Plan calls for the Estuary Partnership to 'protect the ecosystem and species by increasing wetlands and habitat by 16,000 acres by 2010 and promote improvements to how land is developed.'

Pursuant to this objective in 2001, the Estuary Partnership initiated its Habitat Restoration Program. Since that time, through a 40 plus member Science Work Group, we have developed criteria for restoration of habitat by function as well as acreage and we are completing a regional habitat restoration strategy with a large group of partners to improve the effectiveness of restoration efforts and to track them more accurately.

The Estuary Partnership currently manages approximately \$4,000,000 in habitat restoration projects through funds received from Bonneville Power Administration and US Environmental Protection Agency Watershed Initiative. These projects capture a range of activities including dike removal, culvert replacement, land acquisition, habitat creation and restoration, and removal of invasive species and native vegetation planting. These projects when completed will result in approximately 5,000 acres of restored habitat. Most of the focus of these projects has been the lower 46 miles of the river. What needs to be added to our restoration program are projects between river mile 46 and Bonneville Dam.

Should the spill operations plan be approved, the Estuary Partnership supports and encourages expansion of current restoration efforts with additional dollars dedicated for this purpose. According Williams et al., 2003, "D" values generated from NOAA Fisheries PATH model represent an annual value of the differential survival downstream of Bonneville Dam for transported fish compared to non-transported fish. D values below 1.0 indicate that transportation of fish did not provide full mitigation for losses at dams; that is transported fish incurred more mortality downstream of Bonneville Dam that did non-transported fish.

Page two April 6, 2004

From the data available on the transportation effects on Snake River Fall Chinook the annual D value (0.2) presented in NOAA Fisheries biological opinion on the Federal Columbia River Power System appears reasonable (Williams, et al., 2003¹). Therefore, improving habitat conditions for these fish, especially in the freshwater/tidal area of the estuary, may assist in offsetting potential impacts from their transportation downstream of Bonneville Dam

We strongly encourage that the award of habitat restoration and mitigation funds be considered a multi-year process. Funds could support projects below Bonneville Dam and could be targeted for acquisition, dike removal, native re-vegetation projects, culvert replacement and work similar to what is being done in the lower river which would result in success similar to what we are seeing in the lower river. Our experiences with our existing programs leads us to conclude that in order to ensure the project(s) meet specific requirements (in this case the projects will benefit specifically juvenile fall Chinook salmon), that all applicable reviews be complete and permits be obtained, seasonal work restrictions be accounted for, and that monitoring of the project be included, a three year time frame is ideal. In the first 9-12 months, the specific projects would be identified, evaluated against both the Estuary Partnership habitat restoration and the funder's criteria, and permits obtained. On-the-ground work would begin not later than month 12.

The Estuary Partnership has the organizational capacity to manage large projects from both an administrative and programmatic standpoint. Administratively we have specific staff dedicated to grants and contract management to ensure that all aspects of funds received and awarded by the Estuary Partnership meet all applicable requirements. Programmatically we manage the restoration to ensure that partner organizations work is supported and enhanced and that parties are working in a more strategic approach to heightened on-the-ground results. We build on existing efforts, among others the work completed as a result of the 2000 Biological Opinion Reasonable and Prudent Alternative (RPA) 159. The Estuary Partnership is well situated to manage implementation of habitat restoration work that may be associated with this proposal. Using our evaluation process and the criteria we have developed, we can ensure that projects funded will provide benefit for juvenile fall Chinook salmon as well as adult populations and other stocks. For interest, I am enclosing our current habitat restoration criteria and process.

I would be happy to answer questions at any time.

Blorap Mount

Sincerely Yours,

**Debrah Richard Marriott** 

**Executive Director** 

Enclosure

C: Bob Lohn, Regional Administration, NOAA Fisheries

Steve Wright, Executive Director, Bonneville Power Administration

<sup>1</sup> Reserence -

Williams, J.G., et al., 2003. Preliminary draft. Effects of the Federal Columbia River Power System on Salmon Populations. Northwest Fisheries Science Center. 69 pgs.



## Criteria for Identifying and Prioritizing Habitat Protection and Restoration Projects on the Lower Columbia River and Estuary\*

## 1) Habitat Connectivity

This criterion recognizes that habitat connectivity is a landscape level concept. It emphasizes linkages between habitat areas that provide a variety of functions for species at various stages of their life cycle and that gradual alteration of landscapes through natural succession and retrogression allow species that require a variety of habitat components to disperse and survive. In the Lower Columbia, historic changes have limited or cut off species' access to resources needed for their development. Specific emphasis on species with narrow ecological requirements such as salmonids should be considered. Upland habitat areas adjacent to drainage ways, existing protected/restored sites, and areas offering diverse habitat types, function, and successional stages should also be considered.

## 2) Areas of Historic Habitat Type Loss

Land use activities such as diking, filling, and shoreline hardening have removed many of the shallow, peripheral wetlands along the Lower Columbia, isolating the river from its floodplain. This criterion recognizes that historic wetland types such as emergent and forested wetlands that are particularly important for salmonids and a variety of bird species, have been greatly diminished. These habitats promote networks of physical complexity such as shallow, dendritic channels and backwater sloughs. The loss of shallow wetlands may be of particular importance to salmonids with sub yearling life histories that often rear and seek refuge in estuaries for extended periods before migrating to sea. Furthermore, specific importance is placed on the oligonaline and brackish transition zone of the estuary because of its role as a critical staging area for sub yearling salmon in their acclimatization to salt water.

#### 3) Improvement in Ecosystem Function

This criterion acknowledges that some restoration actions can result in greater enhancement of ecosystem functions than others. This criterion emphasizes that location of a project may in some cases be more important than size of the project.

### 4) Adequate Size and Shape

Size refers to reach length and the size of the potential habitat within a reach. In general, larger size enhances habitat stability, increases the number of species that can potentially use the site, makes it easier to find by migratory species, and increases within-habitat complexity.

#### 5) Level of Complexity

This criterion refers to the number and interspersion of different types of habitats within a given restoration reach or area. As the number of habitats increase, so do the number of species that can occupy an area, and the number of functions supported by an area. Higher complexity potentially results in higher biodiversity. It is recognized that some restoration efforts, such as a chum channel, may not strive for habitat complexity.

6) Accessibility For Target Species

Accessibility refers to unencumbered access by Columbia River estuary habitat-dependent aquatic and terrestrial species. Projects that allow or enhance access of these species to important habitats would potentially enhance the feeding, rearing, and refuge functions of the site are preferred. This criterion acknowledges the need to restore habitat for those threatened and endangered species, both aquatic and terrestrial, whose populations are at precariously low numbers and who might benefit from improved near-shore habitat conditions.

## 

1) Use Natural Processes to Restore and Maintain Structure over Habitat Creation
This criterion recognizes that restoration measures should attempt to re-establish the dynamics of
estuarine hydrology, sedimentology, geomorphology and other habitat-forming processes that
naturally create and maintain habitat, rather than implanting habitat structures at inappropriate or
unsustainable locations. Restoration tasks should initiate or accelerate natural processes. Nearly all
manifestations of restoration are accomplished by these processes and not by the direct artifice of the
restoration. Complex engineering manipulations to create new habitats or to enhance existing
habitats can introduce levels of uncertainty about the ecological impacts of such actions and/or the
application of the results to other locations.

Restoration methods such as dike, levee, and tide gate removal should receive first priority for restoration since historic habitat features of the surrounding area may still be intact. Areas that require minor alterations and maximize ecosystem function and processes offer a higher certainty of outcomes and may be more cost-effective and self-sustaining. Weight should be given to tide gate improvements with access to quality stream channels where dike breaching is not an option. For purposes of setting natural processes rapidly in motion some artificial manipulation is required, the best ecological engineering practices should be applied in implementing restoration projects, using all available ecological knowledge and maximizing the use of natural processes to achieve goals.

2) Community Support and Participation

Developing partnerships among communities, organizations, individuals and agencies is a critical element to long term estuary restoration success. The following are considerations regarding this criterion:

- A. Choose projects with local support that are popular and visible, and have political and environmental education components.
- B. Visible, local partners (i.e., those that are technically capable/and can facilitate discussions between local project sponsors and Federal/State agency representatives) are needed to build community support for habitat restoration and protection projects
- C. Select habitat restoration and protection projects that are linked to community/watershed councils' goals and objectives
- D. Look for synergy with existing projects, spatially and biologically, and those with community support and ecological output. That involvement requires creativity and flexibility on the part of all involved look for ecological, social, and economics incentives when identifying potential projects
- E. Depending on the stakeholder and/or landowner, social and economic considerations may be as important as environmental considerations when choosing potential habitat restoration and protection projects
- 3) Potential for Self Maintenance and Certainty of Success

Self-maintenance addresses the ability of a site to persist and evolve toward a natural (historical) habitat condition without significant on-going human intervention. Conditions for controlling

factors in the reach and in the management unit must be appropriately developed and maintained. Self-maintenance means that the habitat can persist and develop under natural climatic variation, and that the system has a natural degree of resilience to natural perturbations. This criterion relies on needing to know the historical conditions and factors attributed to the current conditions.

## 4) Potential for Improvement in Ecosystem Function White Avoiding Impacts to Healthy and Functioning Ecosystems

This criterion observes that at times there are competing restoration goals, and while attempting to improve some ecosystem functions, others may be impaired or lost. This criteria stresses that restoration actions should achieve proposed benefits while avoiding the long term or permanent degradation of other ecological functions of natural habitats or broader ecosystems. Restoration actions should avoid replacing one naturally functioning habitat with another, even if the replacement is perceived to benefit salmon. In particular, activities that further reduce the estuarine tidal prism or impair other large-scale estuarine processes (e.g., circulation, salinity intrusion) or attributes should be avoided.

## 5) Avoid Sites Where irreversible Change Has Occurred

Many aquatic ecosystems within the Estuary have been so heavily modified that the fundamental processes responsible for historic conditions have been significantly altered, in some cases irrevocably. In the Lower Columbia River, freshwater volume has been reduced or the natural flow cycle altered, inputs of sediments and detritus have changed, and tidal flow has been compromised. In some cases, restoration of historic conditions in their original location or state is simply no longer attainable without restoration of historic processes.

Reconstructing the historical river, tidal floodplain and estuarine structure does not necessarily guarantee restoration success; it only decreases uncertainty. Historic templates often provide the framework for restoration goals, as well as a perspective on how ecosystems have been incrementally degraded. At the minimum, the modified capacities of natural processes to support restoring habitats under present conditions must be well understood to develop realistic restoration goals. In some instances, ecological engineering may be necessary to compensate for diminished processes, but such approaches should be used to initiate self-sustaining restoration rather than as an artificial "fix" requiring long-term maintenance.

## 6) Capacity of Sponsor/Partnership

Restoration projects are often complex and costly. To effectively implement and monitor a restoration project over the long term it is necessary that the sponsor and project partners have the capacity to successfully manage the project and achieve success. This criterion will consider an organization's record of project management, its technical expertise, and financial stability.

7) Project Context Within Broader Management and Planning Objectives

This criterion recognizes that within the Lower Columbia system there are a number of management plans and objectives that articulate specific restoration and conservation recommendations. Some of these include; Northwest Power and Conservation Council's Subbasin Plans, Lower Columbia Fish Recovery Board priorities, Oregon's Coastal and Estuarine Land Conservation Plan, North American Waterfowl Management Plan, and the Columbia Land Trust's Land Conservation Priorities. In evaluating proposed restoration projects, considerations should be made to coordinate with these initiatives to minimize duplication of services or contradictory endeavors.

## - Alemonia (citeme)

1) Monitoring and Evaluation with Relationship to Stated Goals and Objectives Monitoring and adaptive management are essential components of restoration and habitat management. Restoration activities should be placed in the context of an experimental design strategy. Metrics should be developed that enhance an understanding of the connection between habitat variables and species' needs. Restoration designs should be monitored and, based on the concept of adaptive management, altered if necessary to achieve desired endpoints and to insure that local projects are self-sustaining. Information already available on limiting factors and properly functioning conditions should be included in the site selection and project design. The monitoring information must span both water quality and physical habitat parameters. Determining an appropriate scale is a critical component of developing a monitoring and effectiveness criteria.

Goals and biological objectives for restoration should be clearly stated, site specific, measurable and long-term, in many cases greater than 20 years. Performance criteria should derive directly from these goals, and should include both functional and structural elements and be linked to suitable, local reference ("target") habitats. Scientific monitoring based on the established performance criteria is essential to improve restoration techniques and to achieve estuarine restoration goals. Performance criteria should indicate whether restoration is progressing as intended and how the project may be altered or redesigned to better achieve project goals.

## 3) Linkages to Reference Site(s)

Determining the effectiveness of restoration activities requires comparison to relatively unaltered reference habitats in close proximity to serve as a "control" for evaluating habitat change. This allows for monitoring the growth, species composition, successional stage and time period of the restoration site in comparison to the reference site and assist in developing performance standards and benchmarks for restoration activities in the estuary. Choosing sites that include an experimental restoration design tied to effectiveness monitoring helps promote a better understanding of the relationship between habitat restoration activities and species response and performance resulting from the restoration activity.

#### 4) Transferability of Results

Projects should be designed as explicit tests of restoration actions that will be evaluated, and, if effective, can be scaled up and applied systematically across the landscape. Restoration results should be evaluated uniformly at individual sites and comprehensively at landscape and ecosystem scales to assess whether the cumulative results of local restoration actions achieve overall recovery goals. The results of monitoring can provide the foundation for more effective restoration methods in future projects.

- \* These criteria are derived in part from:
  - Guiding Ecological Principles For Restoration of Salmon Habitat in the Columbia River Estuary, Charles ("Si") Simenstad, Dan Bottom
  - An Ecosystem-based Approach to Habitat Restoration Projects with Emphasis on Salmonids in the Columbia River Estuary - Johnson, G.E., R.M. Thom, A.H. Whiting, G.B. Sutherland, N. Ricci, J.A. Southard, B.D. Ebberts, and J.D. Wilcox. September 30, 2003.
  - Proceedings of the Lower Columbia River and Estuary Habitat Conservation and Restoration Workshop, Astoria, Oregon - 2001

## FALL RIVER RURAL ELECTRIC Cooperative, Inc.

1150 North 3400 East ASHTON, ID 83420 (208) 652-7431 1-800-632-5726 Fax (208) 652-7825 www.frrec.com

552-023 APR 0.5 2004

March 31, 2004

Mr. Steve Wright Bonneville Power Administration P.O. Box 3621 Portland, OR 97208-3621

Dear Mr. Wright:

Attached please find a resolution passed by the Board of Directors regarding an important issue impacting customers of the Bonneville Power Administration (BPA).

Our resolution calls for a reasoned approach to Columbia and Snake River salmon recovery. We support alternatives to summer spill that would return more fish to our rivers while preserving needed hydropower generation. This salmon restoration strategy could save ratepayers \$75 million dollars, add 50,000 adult salmon and help protect jobs throughout the Northwest.

Currently, the Bonneville Power Administration (BPA) spends more than \$600 million a year on fish and wildlife programs, half of which is related to river operations and dams. The most costly - and least effective - of those efforts is called "summer spill". Recent federal studies show that BPA expects to spend \$77 million per year to save 19,000 fish, with only 20 of those from a run listed under the Endangered Species Act as "threatened".

The good news is there are more effective ways to save salmon at a fraction of the cost. For example, two alternatives identified by river managers could save more than 50,000 additional salmon a year for between \$1 and \$2 million.

Rather than blindly continue a costly and ineffective strategy, we are urging the U. S. Army Corps of Engineers, BPA and NOAA Fisheries to eliminate or reduce summer spill in those cases where science shows that more effective alternatives exist.

We ask your support in that effort and look forward to working with you to increase salmon and jobs throughout the Northwest.

Well M. Saynolds
Dee M. Reynolds
General Man

Attachment

## FALL RIVER RURAL ELECTRIC COOPERATIVE, INC. 1150 N 3400 E Ashton, Idaho 83420

#### Resolution No. 580

SUBJECT:

Regarding River Operations for Fish

DATE: March 22, 2004

WHERE AS, Fall River Rural Electric Cooperative, Inc. is a member-owned electric distribution cooperative whose primary mission is to provide safe, reliable and economical electric service to its member/owners in Idaho;

WHEREAS, Fall River Rural Electric Cooperative, Inc. relies upon generation from the Federal Columbia River Power System for power supply, and recognizes that availability of power generation and the cost of that generation is dramatically affected by the operation of the river system,

WHEREAS, recent studies by the Bonneville Power Administration, the Army Corps of Engineers and NOAA Fisheries show that attempting to flush juvenile fish downstream by spilling water over the dams in summer provides almost no benefit to threatened fish and only marginal benefit to healthy runs of fish, and averages almost 3000 megawatt-months of lost generation at an average cost to ratepayers of \$77 million;

WHEREAS, the above-listed federal agencies outlined alternatives to spill that would increase adult salmon returns by 50,000 fish at a cost of approximately one to two million dollars;

	NOW, THEREFORE, BE ITRESOLVED AS FOLLOWS:
1.	Fall Ruse & Ruse Medicie Co-op urges the federal river managers immediately to take all actions necessary to put in place alternatives that allow elimination of summer spill this years and provide substantial benefits to fish and to ratepayers;
2.	Fall Ruser Busal Electric Co-op urges the Governor to support alternatives to summer spill, and to instruct state agencies to assist with implementation of those options;
3.	Fall Ruses Rusal Cleature. Co-off requests members of congress to urge federal hydropower system operators to immediately implement alternatives to summer spill.
D <i>A</i>	ATED this day of March, 2004.

Board Secretary Chris Ricks

CITY OF ALBION P.O. BOX 147 ALBION, ID 83311 (208) 673-5352 FAX: (208) 673-6/45

552-184 APR 0 8 2004

April 7, 2004

BPA Communications – DM – 7 P.O. Box 14428 Portland, OR 97293-4428

RE: Summer Spill Proposal

Dear Sirs:

The City of Albion, Idaho continues to applaud the efforts of the Bonneville Power Administration and the U.S Army Corps of Engineers to establish a balance among the various factions who are concerned about electrical energy, cost reduction programs, and fish protection.

All of these issues are important to our community and surrounding area. As a result, we have consistently supported BPA in its cost reduction efforts, such as the climination of the recent litigation cost (which failed to pass) and now the proposed summer spill program for salmon. While we claim no technical expertise on most of these complex issues, we believe that a more efficient and cost effective operations program is vital to BPA's future role in the Pacific Northwest.

Without the benefit of reasonably priced electrical power many of our small rural communities, along with their agricultural interest are put at risk. Therefore, we support the initiative to reduce summer spill as an acceptable alternative that will provide a positive impact on the continuing escalation of electrical energy costs.

Respectfully Submitted,

Donald B. Danner

Mayor

City of Albion



961 12TH AVENUE . PO Box 3007

LONGVIEW, WASHINGTON 98632

MERRITTH (BUZ) KETCHAM EDWARD M. (NED) PIPER JOHN M. SEARING

General Manager DENNIS P. ROBINSON

April 6, 2004

Mr. Stephen J. Wright Administrator **Bonneville Power Administration** P.O. Box 3621 Portland, OR 97208-3621

Brigadier General William T. Grisoli Commander and Division Engineer U.S. Army Corps of Engineers Northwestern Division P.O. Box 2870 Portland, OR 97208-2870

Bob Lohn **NOAA Fisheries** Office of Regional Director 7600 Sandpoint Way NE Seattle, WA 98115-0070

#### Gentlemen:

We thank you for the work that went into the Preliminary Proposal for Federal Columbia River Power System Summer Juvenile Bypass Spill Operations, prepared by the Bonneville Power Administration and the US Army Corps of Engineers.

While The Cowlitz PUD Board of Commissioners and I still strongly support an end to the Summer Spill program as outlined in our initial letter dated February 26, 2004, we also agree that the Preliminary Proposal to reduce spill and provide offsets is a positive step for achieving cost-effective salmon recovery. Any action taken to reduce BPA costs, or in this case increase BPA's outside-the-region power market revenues, is a positive for public power customers in the Northwest.

The two initial offsets included in the proposal are a good start and go far in meeting the biological criteria set forth. Any additional offsets adopted must be carefully chosen based on cost-effectiveness and biological benefits.

It is imperative to Northwest electric ratepayers that the net benefits of reducing Summer Spill are no lower than the \$35-\$45 million range proposed and it is also crucial that all three federal agencies work together to see the summer spill operation and mitigation actions begin in 2004.

Thank you for hearing our concerns on this important regional issue. If you have any questions, please feel free to contact us.

Sincerely,

Dennis P. Robinson General Manager

scw. DGA. DPR. BPASummer Spill Program



552 -0 47 APR 0 7 2004

April 5, 2004

Mr. Stephen J. Wright Administrator Bonneville Power Administration 905 N.E. 11<sup>th</sup> Avenue Portland, OR 97232

Dear Mr. Wright:

The American Sportfishing Association (ASA) wishes to express its concern for your proposal to reduce or eliminate summer spill on the Columbia River, an action that will severely damage the local sport fishery of fall Chinook salmon. We commend the Bonneville Power Administration's (BPA) past use of the spillover method to move migrating fish and encourage continued use of this technique to uphold responsibilities of the current hydropower Biological Opinion set forth by the Federal Government to balance fish, power and development. The American Sportfishing Association is a non-profit trade organization whose members include fishing tackle manufacturers, boat builders, retailers, state fish and wildlife agencies, angler organizations and the outdoor media.

For a number of years, we have been striving to find the right balance between development and sustained fishery resources. We agree with improving hydro system management and enhancing energy capabilities, but fish populations must be sustained and protected in the process. We strongly urge you to continue summer spill rates equal to or greater than those used in the summer of 2003.

The Bonneville Power Administration has a responsibility of using public water resources to sustain healthy fish populations. Your agency estimates 20,000 fish would be killed, but Tribal biologists estimate mortality of at least 50,000 to 150,000 fish. State and Federal biologists acknowledge that BPA's mortality estimates are conservative. Your agency also unrealistically estimates that only 24 Snake River Fall Chinook would be eliminated. These endangered fish are the limiting factor for the rest of the sport fishery, cutting the fishery on Chinook by 25% would limit the entire sport fishery.

In 2001, the water supply and snow pack were low and the water was used for power generation instead of fish spill over. This caused high levels of fish mortality. Now, in 2004, there is significant snow pack, and power capacity is more stable, so BPA should uphold their responsibility to the Biological Opinion and complete the summer spill.

Alternate methods of moving fish and reducing summer spill are costly, and time consuming, especially when a proven method exists.

Sincerely,

Gordon Robertson

Souden C. Reform

Vice President AMERICAN SPORTFISHING ASSOCIATION

225 REINEKERS LANE, SUITE 420, ALEXANDRIA, VA 22314 \* 703-519-9691 \* FAX: 703-519-1872
Web: www.asafishing.org \* E-mail: info@asafishing.org

cc: The Honorable Dick Kempthorne, Governor of Idaho

The Honorable Ted Kulongoski, Governor of Oregon

The Honorable Gary Locke, Governor of Washington

The Honorable Judy Martz, Governor of Montana

The Honorable Brian Baird, U.S. House of Representatives

The Honorable Earl Blumenauer, U.S. House of Representatives

The Honorable John Breaux, U.S. Senate

The Honorable Maria Cantwell, U.S. Senate

The Honorable Susan Collins, U.S. Senate

The Honorable Jon Corzine, U.S. Senate

The Honorable Larry Craig, U.S. Senate

The Honorable Michael Crapo, U.S. Senate

The Honorable Peter DeFazio, U.S. House of Representatives

The Honorable Norman Dicks, U.S. House of Representatives

The Honorable Jennifer Dunn, U.S. House of Representatives

The Honorable Peter Fitzgerald, U.S. Senate

The Honorable Doc Hastings, U.S. House of Representatives

The Honorable Ernest Hollings, U.S. Senate

The Honorable Darlene Hooley, U.S. House of Representatives

The Honorable Jay Inslee, U.S. House of Representatives

The Honorable John Kerry, U.S. Senate

The Honorable Rick Larsen, U.S. House of Representatives

The Honorable Frank Lautenberg, U.S. Senate

The Honorable John McCain, U.S. Senate

The Honorable Jim McDermott, U.S. House of Representatives

The Honorable Patty Murray, U.S. Senate

The Honorable George Nethercutt Jr., U.S. House of Representatives

The Honorable C.L. Otter, U.S. House of Representatives

The Honorable Dennis Rehberg, U.S. House of Representatives

The Honorable Michael Simpson, U.S. House of Representatives

The Honorable Gordon Smith, U.S. Senate

The Honorable Adam Smith, U.S. House of Representatives

The Honorable Olympia Snowe, U.S. Senate

The Honorable Greg Walden, U.S. House of Representatives

The Honorable Davie Wu, U.S. House of Representatives

The Honorable Ron Wyden, U.S. Senate

5071 Umpqua Hwy 99 Drain, OR 97435 April 5, 2004

Summer Spill Proposal BPA, Communications-DM-7 P.O. Box 14428 Portland, OR 97293-4428

Dear Sirs:

Concerning the Summer Spill Proposal, I cannot see spending that great amount of money for such a small run of fish, especially when there are much better alternatives to spill that would increase salmon returns greatly and at a MUCH LOWER COST.

The summer Spill Proposal seems like a blind fish run at best with no concern about cost which will eventually be passed on down to electricity users.

I understand that there are federal agency alternatives to spill that would be MUCH better.

Please consider these other alternatives.

Sincerely,

James and Geneva Bridges

James Bridges Deneva a. Bridges



552-185 APR 08 2004

April 7, 2004

Stephen J. Wright Administrator Bonneville Power Administration P.O. Box 3621 Portland, OR 97208-3621

Re: Summer Spill Proposal

Dear Mr. Wright:

Benton PUD supports the Bonneville Power Administration's and U.S. Army Corps of Engineers' proposed three-year pilot plan to adjust spill at certain dams while stepping up measures to protect salmon and steelhead.

The proposed pilot plan is a step in the right direction for achieving cost-effective salmon recovery while taking into account the power users' needs. The proposal responds to the public's desire for government to continuously seek the most efficient operations possible while accomplishing the region's environmental objectives.

The two initial offsets in the proposal are a good start and go far in meeting biological criteria. Any additional offsets must and should be chosen based on cost-effectiveness and biological benefits.

Very truly yours,

James W. Sanders General Manager

JWS/tah

c: U.S. Army Corps of Engineers, Brigadier General William T. Grisoli

Bob Lohn, NOAA Fisheries

Northwest Power and Conservation Council

Governor Locke



April 6, 2004

Mr. Stephen J. Wright Administrator Bonneville Power Administration PO Box 3621 Portland, OR 97208-3621 1411 W. CLARK + PO BOX 2407 PASCO, WA 99302-2407

> 509-547-5591 FAX 509-547-4116

Dear Mr. Wright:

Franklin PUD strongly supports the reduction of summer spill. We believe that BPA is taking a step in the right direction for achieving cost-effective salmon recovery by providing alternatives to summer spill. The spill reduction alternatives should be implemented in a cost-effective manner and are a good start and go far in meeting the biological benefits for salmon recovery. We believe that your plan makes good strides by eliminating spills at the four dams in August, when the least number of fish benefit from them.

But we must do so in a way that is cost effective and does not jeopardize fall Chinook or other species not on the Endangered Species list. Some options worth considering include further enhancing the predator control program, adding avian predation control, and increasing hatchery production at specific hatcheries that are in the geographic areas of concern.

Franklin PUD will continue to work collaboratively with BPA to assist in developing long-term solutions to the current summer spill options so that the Pacific Northwest can save money and still save fish, while balancing the multiple objectives of the river system.

Sincerely,

Jean Ryckman Interim Manager

Jean Ryckman

Franklin PUD

LTR 2004-077

THE POWER IS YOURS



April 6, 2004

Mr. Stephen J. Wright Administrator Bonneville Power Administration PO Box 3621 Portland, OR 97208-3621 1411 W. CLARK + PO BOX 2407 PASCO, WA 99302-2407

> 509-547-5591 FAX 509-547-4116

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Sincerely,

Jean Ryckman Interim Manager

Jean Ryckman

Franklin PUD

LTR 2004-077

THE POWER IS YOURS

Dear Steve Wright

I am a member/owner of a not-for-profit, rural electric cooperative who buys 100% of its power from the Bonneville Power Administration (BPA)

I understand that during an average water year, summer spill during July and August costs BPA \$77 million in lost generation—for little, if any, improvement in survival rates of threatened salmon...I believe there are more effective ways to save salmon at a fraction of the cost...For example, two alternatives identified by federal, state and tribal representatiaves could save more than 50,000 additional salmon a year for between \$1 and \$2 million. These are expanding the Northern Pikeminnow "management" program and expanding the fall Chinook protection program in the Hanford Reach.

Summer spill was begun with good intentions, but has not proven as effective as first hoped. Rather than blindly continue a costly and ineffective strategy, I urge the U. S. Army Corps of Engineers, BPA and NOAA Fisheries to eliminate or reduce summer spill in those cases where science shows that more effective alternatives exist.

I am asking your support in that effort.

The ENERGY PORCE RESERVED OF MEDICAL SPECIAL CORES FROM AND CO.

professional grand with advantage to the profession of a company product region of accessing of

Sincerely,

John Newton
1221 Onaway RD
Princeton ID 83857

March 25, 2004



SS2-618 APR 01 2004

Mr. Steve Wright
Bonneville Power Administration
905 N.E. 11th Avenue
P.O. Box 3621
Portland, OR 97208-3621

Dear Steve:

Attached please find a resolution passed by the Board of Northern Lights, Inc. regarding an important issue impacting customers of the Bonneville Power Administration (BPA).

Our resolution calls for a reasoned approach to Columbia and Snake River salmon recovery. We support alternatives to summer spill that would return more fish to our rivers while preserving needed hydropower generation. This salmon restoration strategy could save ratepayers \$75 million dollars, add 50,000 adult salmon and help protect jobs throughout the Northwest.

Currently, the Bonneville Power Administration (BPA) spends more than \$600 million a year on fish and wildlife programs, half of which is related to river operations and dams. The most costly – and least effective – of those efforts is called "summer spill". Recent federal studies show that BPA expects to spend \$77 million per year to save 19,000 fish, with only 20 of those from a run listed under the Endangered Species Act as "threatened".

The good news is there are more effective ways to save salmon at a fraction of the cost. For example, two alternatives identified by river managers could save more than 50,000 additional salmon a year for between \$1 and \$2 million.

Rather than blindly continue a costly and ineffective strategy, we are urging the U. S. Army Corps of Engineers, BPA and NOAA Fisheries to eliminate or reduce summer spill in those cases where science shows that more effective alternatives exist.

We ask your support in that effort and look forward to working with you to increase salmon and jobs throughout the Northwest.

Sincerely,

Northern Lights, Inc.

Jon Shelby,

General Manager

enc.

#### RESOLUTION NO. 838-04

## NORTHERN LIGHTS, INC.

## RESOLUTION REGARDING RIVER OPERATIONS FOR FISH

WHEREAS, Northern Lights, Inc. is a member-owned electric distribution cooperative whose primary mission is to provide safe, reliable and economical electric service to its member/owners in northern Idaho and western Montana:

WHEREAS, Northern Lights, Inc. relies upon generation from the Federal Columbia River Power System for power supply, and recognizes that availability of power generation and the cost of that generation is dramatically affected by the operation of the river system;

WHEREAS, recent studies by the Bonneville Power Administration, the Army Corps of Engineers and NOAA Fisheries show that attempting to flush juvenile fish downstream by spilling water over the dams in summer provides almost no benefit to threatened fish and only marginal benefit to healthy runs of fish, and averages almost 3000 megawattmonths of lost generation at an average cost to ratepayers of \$77 million;

WHEREAS, the above-listed federal agencies outlined alternatives to spill that would increase adult salmon returns by 50,000 fish at a cost of approximately one to two million dollars;

## NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

- 1. Northern Lights, Inc. urges the federal river managers immediately to take all actions necessary to put in place alternatives that allow elimination of summer spill this year and provide substantial benefits to fish and to ratepayers;
- 2. Northern Lights, Inc. urges the Governors to support alternatives to summer spill, and to instruct state agencies to assist with implementation of those options;
- 3. Northern Lights, Inc. requests members of Congress to urge federal hydropower system operators to immediately implement alternatives to summer spill.

BE IT FURTHER RESOLVED, that this Resolution has been duly adopted by the Board of Directors of Northern Lights, Incorporated, in regular session this 22nd day of March, 2004.

NORTHERN LIGHTS, INC.

## CERTIFICATION

I, Steve Elgar, do hereby certify that the attached copy of Board of Directors
Resolution No. 838-04, Resolution Regarding River Operations for Fish, adopted
on March 22, 2004, is a true and correct copy of Resolution No. 838-04 of Northern
Lights, Incorporated, of Sagle, Idaho.

Steve Elgar, Secretary-Treasurer

Dated: March 22, 2004



## Longview Fibre Company

Value-Added Products . Sustainable Forestry

April 2, 2004

Mr. Steve Wright Administrator Bonneville Power Administration 905 NE 11<sup>th</sup> Avenue Portland, OR 97232

Dear Mr. Wright:

Your alternative summer-spill operation for fish proposal is a positive first step, and Longview Fibre Company urges your implementation of this reasonable three-year plan.

This effort in response to the essential need for low-cost electric power to users, including our Company, while developing a combination of actions to further protect fish is encouraging.

Anticipated savings of up to \$45 million annually with this plan will benefit BPA customers, and should also help lower the overall power market in late summer. The August spill-reduction plan when few fish benefiting from spill are in the river and the proposed salmon- and steelhead-mitigation measures make sense.

Your agency's working to provide the most efficient operations possible, including alternative fish-recovery/summer-spill projects, is good to see.

Very truly yours,

Richard H. Wollenberg President, C.E.O.,

Chairman of the Board

Richard J. Parker Senior Vice President-Production, Mill Manager

jcm

## Feedback on BPA's Strategic Direction April, 2004

Utility Name: Midstate Electric Cooperative Inc.

#### Tiered Rates / Allocation

- Tiered Rates should only be used for the exception not the rule. We need to simply the rate process, tier rates would only make it more confusing. If the allocations approach failed to work out, then use tiered rates for new utilities, new growth, or utilities that did not sign longer term contracts.
- Allocation can only work in the Pacific Northwest if BPA has the spine or leadership to come up with one product and provide this one product to all of the preference customers. This would not be easy, as BPA needs to have a simple allocation method that provides no special deals for any customer class (slice, non-slice, pre-subscription etc.). Basically, one simple allocation method so all (including elected officials) can understand the approach.

### **DSI Service**

• It is time for the DSI customers to either pay for the power at the going rate or close down. No special deals.

## **IOU Service**

• It is time to have a better understanding with the IOU's. Currently, the IOU's are getting more value out of the FBS than what the preference customers are getting. Just look at some of the retail rates of preference customers compared to the IOU's. Maybe it is time to eliminate some of the programs that benefit the IOU's more than the preference customers. We need to review the historically background on the residential exchange that was started in the 80's and determine if the calculations used are in the sprit of the Northwest Regional Act.

#### **RTO**

- What I see is more overhead cost if an RTO's is formed. If we must have an RTO by FERC requirements, we must maintain a very lean organization with only nine utility people running the organizations. Otherwise we will have another oversight group like the Northwest Regional Power council that cost the preference utilities more money, and will not provide the needed service.
- If an RTO is formed, it must have the ability to construct new transmission line where and when needed and the authority to determine new transmission routes.

#### Summer Spill

We need to eliminate the summer spill to reduce the power cost of operations.
 What is the value of summer spill to my members living in LaPine, Oregon? This is a program that cost BPA more money, which then cost the cooperative more money.



SS2-048 APR 07 2004 Commissioners

Nancy E. Barnes Carol J. Curtis Byron H. Hanke

Chief Executive Officer/ General Manager Wayne W. Nelson

April 5, 2004

Mr. Stephen J. Wright Administrator Bonneville Power Administrator P.O. Box 3621 Portland, OR 97208-3621

Dear Mr. Wright:

RE: Summer Spill Proposal

We have examined the "Preliminary Proposal for Federal Columbia River Power System Summer Juvenile Bypass Spill Operations" and are pleased that your process and review has resulted in a proposed three year program of spill reductions along with mitigation actions. We have supported this approach for several years and believe it is a wise step in the right direction.

We believe this action will result in greater biological benefits to affected salmon stocks and allow the Federal Columbia River Power System to remain an economic, efficient and reliable energy source. We are supportive of the public review process to be completed at the conclusion of the three year period which will allow for recommendations to the federal agencies for the most biologically-effective spill actions at the lowest possible cost.

We have long believed that predation in many forms has contributed in large part to depleted salmon returns and are pleased to see the intended offset benefits that should result from more aggressive and focused removals of the Northern Pikeminnow through an enhanced Northern Pikeminnow Management Program (NPMP).

We are pleased to see the proposed agreement between the Bonneville Power Administration and the Grant County Public Utility District which proposes to maintain certain outflows from federal projects upstream from Priest Rapids Dam which will allow actions that will reduce the stranding of young fry in dewatered gravel or isolated pools. Even though these actions will enhance species of salmon not presently listed, we support anti-stranding as an offsetting measure. The changes to flow and further actions are predicted to dramatically increase adult returns of Hanford Reach fall Chinook salmon.

April 5, 2004 Page 2

Additional offsets should be considered based on cost effectiveness of the biological benefits. We support and prefer enhancements to avian predation research which we believe will lead to actions that will reduce smolt mortality due to Caspian tern predation. We also believe that improved artificial production in certain geographical areas could help offset survival impacts associated with spill reductions for affected stocks of hatchery origin. We look forward to information from the monitoring activities which are ongoing as part of this and other fish management programs that will allow us to examine the success of the reduced spill proposal

We appreciate the opportunity to comment on this very important issue.

Very truly yours,

Clark Public Utilities

Nancy Barnes

President, Board of Commissioners

Many Barnes

NB/rw

March 18, 2004

Dear Mr. Sleve Wright

I am a member/owner of a not-for-profit, rural electric cooperative who buys 100% of its power from the Bonneville Power Administration (BPA).

I understand that during an average water year, summer spill during July and August costs BPA \$77 million in lost generation—for little, if any, improvement in survival rates of threatened salmon. I believe there are more effective ways to save salmon at a fraction of the cost. For example, two alternatives identified by federal, state and tribal representatives could save more than 50,000 additional salmon a year for between \$1 and \$2 million. These are expanding the Northern Pikeminnow "management" program and expanding the fall Chinook protection program in the Hanford Reach.

Summer spill was begun with good intentions, but has not proven as effective as first hoped. Rather than blindly continue a costly and ineffective strategy, I urge the U.S. Army Corps of Engineers, BPA and NOAA Fisheries to eliminate or reduce summer spill in those cases where science shows that more effective alternatives exist.

I am asking your support in that effort.

Omer & Celeste Church 36382 Woodhaven Ln. Lenore, ID 83541

I deste à Omer Church

552\_/83 APR 0 8 2004 5761

## Feedback from Pacific County PUD No. 2 on BPA's Strategic Direction Submitted by R. Kirsten Watts April 1, 2004

On March 31, 2004, I had a conversation with Doug Miller, Pacific County PUD No. 2's general manager. It was evident that he has taken time to read through the materials I provided him on BPA's strategic direction for the future and think about what he had read.

In general, he believes BPA is going in the right direction but knows that the "devil is in the details". Below are his comments on a number of issues.

### Tiered rates

- Does not support an 80/20 split between tier 1 and tier 2 that he has heard BPA is considering; it is too hard to determine the levels of aMW that should be subject to various tiers
- Would support the creation of a tiering methodology that subjects all public load to tier 1 only for the FY 2007-2011 period.
- Any load that exceeds the capability of the FBS should be served at tier 2 post-FY 2011
- IOUs should receive only financial benefits, not power

## **DSI Service**

- BPA should only serve viable, financially sound entities (e.g., Alcoa)
- Provide post FY 2006 service to DSIs based on today's load, at today's prices; do not base service on forecasted load
- Not sure about duration of contract, but 5 years seems right
- All contract should contain strong protective language that will give BPA the flexibility to continue or terminate service as warranted

#### **IOU Service**

- Provide only financial benefits; no power; the regional loads and resources are so
  closely aligned that it only makes sense to preserve the benefits of the FBS for the
  public customers
- Unclear about the appropriate methodology by which to provide the financial benefits

#### **RTO**

- Was encouraged by Allen Burns and Lonn Peters recent presentation at WPUDA but remains opposed to the direction of RTO West
- Very concerned about the formation of Development and Operations Boards and the current direction of the RRG; planning to make customers to buy rights to capacity on transmission lines runs counter to preference as outlined in BPA's statutes; FERC stands to possibly expand its jurisdiction to include public utilities which is very threatening

• Shares the sentiments WPUDA expressed in its 2-26-04 letter to Administrator Wright; the region can work out its own problems, we do not need an entire enterprise to resolve transmission problems

## Summer Spill

- This issue remains a political "hot potato", with BPA walking a fine line
- The current proposal does not go far enough; would prefer to see no spill at all of the projects in July
- It is okay to take baby steps instead of giant steps on this issue given the political ramifications
- Understands and supports the two major proposed offsets—increased control of the Northern Pikeminnow and Mid-Columbia/Hanford Reach anti-stranding operations.

## Allocation

- Believes that there are too many definitions of allocation being discussed
- Miller's proposed methodology: 1) BPA selects a year's worth of load data on which to calculate a customer's net requirements (need to determine methodology for doing this—historical, average, forecast, other), 2) BPA serves the customer's net requirements up to the capability of the FBS, 3) The customer chooses from a variety of methods to serve load not covered by FBS service (e.g., purchase a market based product from BPA or some other entity, develop a resource, etc.)
- BPA should not purchase any additional resources to "grow" the existing system

#### C&RD

- Wants to see this program continued post 2006
- Use current methodology/application and discount rate (0.5 mills/kWh)

## Renewables

 Again, BPA should not purchase any additional resources to "grow" the existing system

## Costs

- Customers should continue to learn about and have some say about BPA's costs; supports the Customer Collaborative approach
- Transparency is important
- BPA should be mindful of costs associated with developing and growing its workforce, especially when filling behind a high number of retirees.

#### Other

 Supports offering lowest cost PF through FY 2011 to all public customers with 5 year purchase commitments Dear Steve Wright,

I am a member/owner of a not-for-profit, rural electric cooperative who buys 100% of its power from the Bonneville Power Administration (BPA)

I understand that during an average water year, summer spill during July and August costs BPA \$77 million in lost generation—for little, if any, improvement in survival rates of threatened salmon...! believe there are more effective ways to save salmon at a fraction of the cost...For example, two alternatives identified by federal, state and tribal representatiaves could save more than 50,000 additional salmon a year for between \$I and \$2 million. These are expanding the Northern Pikeminnow "management" program and expanding the fall Chinook protection program in the Hanford Reach.

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I am asking your support in that effort.

Roman Mark Commen Bellington (1994) - Grand Granden (1994) (1994)

January Carlo Hora Carlo Control Control Control Carlo C

Sincerely.

Pat Drumm 1221 Onaway Rd. Princeton, ID 83857



"Owned By Those We Serve"

552-049 APR 07 2004

Your Touchstone Energy\* Cooperative

1330 21st Street - Heyburn, ID 83336 - Office: (208)679-2222 - Fax: (208)679-3333 - www.united electric.org

BPA Communications DM-7 PO Box 14428 Portland, Oregon 97293

RE: Summer Spill

## Dear BPA Communications:

These comments are being made in support of reducing the spill. I am the General Manager for a small electric cooperative located in Heyburn Idaho. United Electric serves approximately 6000 meters in Minidoka and Cassia Counties. About half of our sales are to residential with the rest being split between general service and irrigation. Our area is noted for having one of the highest unemployment rates in Idaho. United Electric believes that it is important to save salmon and that salmon are an important part of our region. United also believes that it is important to target mitigation measures that are the most cost effective. Counts of salmon tell us that spill produces small benefits to the recovery effort. Other measures are more effective and should be forwarded while spill should be dramatically reduced.

- The proposal of reducing spill and providing offsets is going in the right direction for achieving cost-effective salmon recovery.
- The two initial offsets are a good start and go far in meeting the biological criteria.
- Any additional offsets must be chosen based on cost-effectiveness and biological benefits.

## Specific offsets should include serious consideration of the following:

- Further enhancing predator control programs,
- Adding avian predation control,
- Consider reducing non-tribal commercial harvest if necessary, and
- Increasing hatchery production at specific hatcheries that are in the geographic areas of

concern.

Thank you for the opportunity to comment. If you have questions please feel free to call or write me.

Respectfully Yours

Ralph Williams, General Manager

United Electric, Co-op, Inc.

Still Stering K. 552-227



## IDAHO STEELHEAD & SALMON UNLIMITED

Committed to Recovering Idaho's Anadromous Fish Runs

PRESIDENT R.L. "Nick" Nicholson 634-4973

SECRETARY Shirley Sanchotena 585-9603

> TREASURER Bryan Sprague 226-5683

BOARD OF DIRECTORS Mitch Sanchotena Middleton

> Mickey Tumbow Boise

John Vanek American Falls

> Steve Bruce Boise

Bryan Sprague American Falls

> Gene Kurtz Arco

John Patterson Lewiston

Dan Hurzeler Idaho Falls

Scott Schnebly Ketchum

Kerry Brennan Riggins

> Jason Roth Hailey

Kim Manley Riggins

Tim Crist Twin Falls

R.L. "Nick" Nicholson McCall To; The Bonneville Power Administration P.O. Bx 3621 Portland, Oreg. 97208-3621

Dear Sirs, May 2, 2004

My organization exists for the single purpose of protecting and enhancing Idaho's once great anadromous fish runs. Prior to the 1960s organizations such as ours were not necessary. Idaho enjoyed steelhead and salmon runs that numbered into the hundreds of thousands. Our hundreds of miles of remote spawning grounds teemed with uncountable fish. Together with our sister states Washington and Oregon, enough wild fish were spawned to feed millions of people scattered all over the world. This is not so anymore and I do not have to tell you the reasons why. The massive dams that dot the Snake and Columbia Rivers mark clearly the history of the demise of those fish runs. You also know that this is not an arguable premise as even a cursory glance at historical charts clearly reveals this truth.

A further look at history reveals that power production was a secondary purpose for building the four lower Snake River dams. The primary purpose was reported to be cheap and efficient transportation of grain crops from the Palouse country to Portland. Presently power production is clearly your main purpose and protection of fish simply an afterthought. At the establishment of your administration by President Roosevelt you were given the charge of caring for fish and wild life in the Columbia Basin. Your present purpose statements still list that responsibility. Since that time, however, wild salmon and steelhead continue their descent toward extinction. As a caretaker of that magnificent resource you have failed miserably.

The plight of wild fish is a result of numerous decisions made during these past 60 years. Each made with the knowledge that whatever was involved was worth more than the tiny bite that represented further fish loss. Today those tiny bites have grown into a disastrous feeding frenzy that has nearly destroyed anadromous fish.

ISSU
P.O. Box 2294
Boise, Idaho 83701
(208) 585-9603
FAX (208) 585-9707
E-Mail: issu@mindspring.com

# OREGON DAHO STANDA

#### IDAHO STEELHEAD & SALMON UNLIMITED

Committed to Recovering Idaho's Anadromous Fish Runs

PRESIDENT R.L. "Nick" Nicholson 634-4973

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Kerry Brennan Riggins

> Jason Roth Hailey

Kim Manley Riggins

Tim Crist Twin Falls

R.L. "Nick" Nicholson McCall Your appeal to your ratepayers is blatantly mis-leading. The additional power is not for local consumption and is so small in the scheme of things that it should have zero effect on rates. Your suggestions to recoup lost fish are exaggerated and speculative. We have lived with those kinds of false promises for years and present wild fish numbers belie their validity.

No more bites gentlemen. Your summer spill curtailment could be the last bite that completes the cycle and pushes fish past the point of recovery. Please honor your commitment to fish and wildlife and forgo the 2% increase in revenue spill curtailment could generate. Idaho Steelhead and Salmon Unlimited, a thousand people strong, strongly urge you to do the right thing. If any spill change takes place, increase it.

It is time to reverse directions gentlemen. ISSU asks you to join us in the pursuit of wild fish restoration. We have the opportunity in our lifetime to reverse the trend toward extinction. It is only a small bite true, but it could be a first bite, the first step on the long road back. Help us disband organizations such as ours, we would much rather be fishing.

Sincerely

R. L."Nick" Nicholson

President ISSU P.O. Bx. 1511

McCall, Idaho 83638

209-634-4973

ISSU
P.O. Box 2294
Boise, Idaho 83701
(208) 585-9603
FAX (208) 585-9707
E-Mail: issu@mindspring.com

#### Attachment #2:



### FISH PASSAGE CENTER

2501 SW First Avenue, Suite 230, Portland, OR 97201-4752

Phone: (503) 230-4099

0-4099 Fax: (503) 230-7559

http://www.fpc.org e-mail us at fpcstaff@fpc.org

#### **MEMORANDUM**

TO:

Rob Lothrop, CRITFC

middle Setlet

Bill Tweit, WDFW

FROM:

Michele DeHart

DATE:

April 6, 2004

RE:

Transportation of fall chinook smolts and related fall chinook migration and tag

data concerning summer spill for fish passage

In response to your request for smolt to adult return rates on transported fall chinook the Fish Passage Center staff reviewed and analyzed the available PIT tag data. We calculated smolt-to-adult returns for transported and non-transported fall chinook from the Snake and Columbia rivers. This analysis of transported versus in-river migrating smolt-to-adult returns is preliminary; NOAA Fisheries staff will conduct the official analysis.

Our review resulted in several observations about fall chinook migrations, in addition to the smolt-to-adult returns, that relate directly to the present discussions regarding summer spill for fish passage. Thus far all of the discussions surrounding summer spill have centered on the BPA SIMPAS model analysis of average conditions with point estimates of juvenile passage data. The data we reviewed, such as actual adult return PIT tag data was not recognized or considered.

We have summarized our conclusions below, followed by a detailed discussion of each point. These data suggest that the benefits of summer spill for fish passage have been underestimated in deliberations thus far and that a decision to eliminate summer spill carries a significant risk of being in error, particularly in regard to impact on returning adults and assumptions regarding the benefits of the transportation. In accord with our normal FPC procedures, copies of this memorandum responding to your data request have been circulated to other CBFWA members and posted on the FPC web site.

Smolt-to-adult return rates for transported fall chinook indicate that a spread the
risk policy such as that implemented for spring chinook should be considered for
fall chinook. The adult return data indicates that the best returns occurred when

spill occurred at McNary throughout the summer period. The fall chinook SARs on transported fish are disappointing and may not achieve the recovery goals assumed in the 2000 BIOP. This will affect the analysis of impacts of the summer spill program modifications because a spread the risk policy will result in a larger proportion of Snake River fall chinook migrating in-river. The SIMPAS analysis conducted to date did not examine the impacts of discontinuing summer spill with the implementation of a spread the risk policy for transportation.

- PIT tagged adult fall chinook actual returns from 1994 through 2001, that were detected as juveniles, indicate that a large proportion of the fall chinook that survived to return as adults migrated, as juveniles, past Ice Harbor in late July and August and past McNary in August. This indicates that the SIMPAS predictions of impact on adult returns should be regarded with caution because the juvenile passage distribution assumed in BPA's analysis does not reflect actual adult return data and does not provide a robust basis for decisions. Spill may be much more important to adult returns than inferred from juvenile modeling data.
- Review of the data and research results indicates that there is a flow survival and flow travel time relationship for fall chinook. Analysis of alternative management scenarios and mitigation offsets have not considered or utilized this information. Low flow conditions will shift the passage distribution to later in the migration. SIMPAS analysis of average conditions does not capture this effect because it does not vary flow nor does it relate flow to passage distribution. Elimination of spill in August as discussed by BPA will affect a larger proportion of the migration in low flow years than estimated with their model.
- Our review of the data shows that a comprehensive system wide life cycle
  monitoring program is needed for fall chinook. We have developed an outline of a
  PIT tagging monitoring program that would assist the agencies and tribes in
  deliberations of mitigation and protection hydrosystem actions needed for fall
  chinook.

#### Fall chinook smolt-to-adult returns

Smolt-to-Adult return rates (SARs) of subyearling fall chinook for comparing in-river versus transportation migration routes based on available regional PIT tag data.

The PIT tag data available for subyearling fall chinook originating in the Snake River basin above Lower Granite Dam consists of wild fall chinook PIT tagged in the mainstem Snake and Clearwater river above Lewiston and hatchery fall chinook PIT tagged for the supplementation releases made at and near the Pittsburg Landing, Captain Johns Rapids, and Big Canyon Creek acclimation ponds over the years 1995 to 2001. Typically, over 95% of the PIT tagged subyearling fall chinook are hatchery fish. Because the goals of these PIT tag studies required keeping the fish in-river, there were low numbers of PIT tagged subyearling chinook routed to transportation until 2001 when NMFS began a multi-year transport evaluation.

Until the NMFS transportation study, most PIT tagged subyearling fall chinook in the Snake River basin have been purposely returned-to-river for in-river survival estimation. Only PIT tagged fish arriving the transportation sites during the standard timed subsamples were being transported. Consequently, prior to 2001 the sample size for this group was very small. Therefore, for this analysis all PIT tagged smolt detected in the raceways or sample rooms,

regardless of prior detection at an upstream dam, were combined to create the transportation category. Fish first-time detected at Little Goose Dam and either transported at Little Goose or returned to river and then transported at Lower Monumental Dam were converted to Lower Granite Dam equivalents by dividing by the CJS survival estimate (derived from the Cormack Jolly Seber Model) between Lower Granite tailrace and Little Goose tailrace. Likewise for first-time detected fish at Lower Monumental Dam, the smolt numbers transported were expressed in Lower Granite Dam equivalents. The sum of all PIT tagged smolts from the four transportation sites expressed in Lower Granite Dam equivalents determined the initial juvenile sample size used in the development of smolt to adult return rates.

The in-river PIT tagged subyearling fall chinook with first-time detections at Lower Granite, Little Goose, Lower Monumental, or McNary dams were each divided by the reach survival component to create the total smolts in Lower Granite Dam equivalents. Because the number of PIT tagged smolts with a detection at a transportation site is a known count, and the number of PIT tagged smolts transported or returned-to-river at each sites is a known count, the only estimation required is the expansion to Lower Granite equivalent and this is done similarly for both in-river and transported fish. This make the comparison of the transported category termed T in Figure 1 and the in-river category termed C1 in Figure 1 the most direct comparison between the two modes of migration through the hydro system. With the exception of one year (1998) the SARs for the in-river fish exceeded the survival of transported fish. While this trend was consistent among years, the low sample sizes for transported fish prior to 2001 must be considered. The most conservative conclusion from the present data is that there appears little difference between PIT tagged subyearling chinook transported or bypassed at collector dams.

The in-river PIT tagged subyearling fall chinook that most closely relates to the untagged population is termed C0 in Table 1. This group must be estimated by first determining the population at Lower Granite Dam and then subtracting off all first-time detected fish at Lower Granite, Little Goose, Lower Monumental, and McNary dams, with numbers from each site divided by the appropriate survival component to create a result in Lower Granite Dam equivalents. The highest SAR for the C0 category occurred for migration year 1999 which had no PIT tagged fish overwintering until the following year. The very high flows of 1999 that extended into the mid-July of that year, and associated spill, may have allowed many subyearling chinook to pass undetected that year under good in-river conditions. The SAR of C0 category subyearling fall chinook appears to be higher than the SAR of either transported or bypassed subyearling migrants for the seven years of samples. A caveat to the above conclusion is a methodological issue with the C0 inriver group, which may require additional resolution. We found a possible discrepancy between CJS estimates of collection efficiency, and FGEs reported in the 2000 FCRPS BiOp, which may affect numbers of smolts in the C0 group. The bypass FGE in Table D-2 of the 2000 FCRPS BiOp is 53% at Lower Granite Dam. With any spill at Lower Granite Dam during the last month of the spring spill program, ending June 20, the effective collection efficiency for subyearling chinook for the season would tend to be somewhat lower than the 53% FGE level. However, the CJS model for the aggregate subyearling chinook was greater than 53% in 4 of the 7 years investigated (0.66 in 1995; 0.63 in 1996; 0.41 in 1997; 0.47 in 1998; 0.43 in 1999; 0.56 in 2000; and 0.68 in 2001). This may lead to a bias in C0 estimated numbers of smolts being too low, and therefore, the SARs being too high. However, even if one were to double the C0 smolt, the SAR of C0 category subyearling fall chinook would still appear to be higher than the SARs of the other two categories in each year.

PIT tag detections systems in the Snake River end operation on October 31, and begin again the next spring. Consequently, fish passing during this period are not detected. However, for fall chinook smolts that overwintered and were detected only during the following year at one or more dams as a yearling, the SARs were over 1% in all cases where large enough smolt numbers were present to provide some adult returns (Table 2). Although these SARs are higher than that of their subyearling chinook counterpart, it is difficult to make a direct comparison because the number of smolts overwintering cannot be expanded to Lower Granite equivalents due to the lack of an overwintering estimate of survival. It appears that even after consideration of these holdover migrants little difference may still exist between transport and in-river survival during the following year since the raw SARs shown in Table 2 are fairly similar between categories.

NMFS began a transportation study at McNary Dam in 2001, but also had large numbers of PIT tagged subyearling fall chinook released in 1999 and 2000 for facility survival studies (Table 3). These latter PIT tagged fish were released in the gatewell for the test group and in the tailrace for the control group. Since most gatewell fish were return-to-river, there were only limited numbers of smolts transported. The SARs of the transported smolts were less than that of the in-river migrants, but these results may simply imply that no real difference occurs between the two categories. The partial returns of the full transportation study began in 2001, show that the SARs of the transported and in-river smolts, based on returning jacks and 2-salt adults, are the same. However, 3 and 4-year ocean fish from the 2001 outmigration are yet to return so complete SARs are not possible. But these trends are suggesting that transportation is likely not showing any benefit over in-river migration routes.

So in summary our preliminary review of fall chinook PIT tag data is not showing a benefit from transportation over in-river migration. Given this information it may prove more advantageous to the migrating fall chinook to adopt a spread the risk policy for fall chinook (similar to spring chinook) and adopt improved in-river migration strategies.

Table 1. Smolt-to-adult survival rates (SARs) from LGR-to-LGR for PIT tagged hatchery and wild subyearling fall chinook released in the mainstem Snake and Clearwater rivers above Lewiston, Idaho, within three categories of outmigration status.

# Subyearling fall chinook migration year 1995 (includes 90 smolts partially outmigrating in 1996)

smolts adults SAR category 24 8.11% 296 C<sub>0</sub> 45 0.90% 5,021 C1 10 0.75% 1,338 LGR pop. category# %categories in pop. 6,655 94.4% 7,049

#### Subyearling fall chinook migration year 1999

(no smolts outmigrated in 2000)

category	smolts	adults	SAR
C0	2,479	210	8.47%
C1	19,155	254	1.33%
Τ	2,428	21	0.86%
LGR pop.	category#	%categories in pop.	
24,280	24,062	99.1	1%

#### Subyearling fall chinook migration year 1996

(includes 217 smolts partially outmigrating in 1997)

category	smolts	adults	SAR
CO	794	23	2.90%
C1	9,060	46	0.51%
T	1,105	4	0.36%
LGR pop.	category#	%categories	s in pop.
11,232	10,959	97.6%	

#### Subyearling fall chinook migration year 2000

(includes 223 smolts partially outmigrating in 2001)

category	smolts	adults	SAR
C0	423	10	2.36%
C1	5,391	35	0.65%
Т	919	6	0.65%
LGR pop.	category#	%categories in pop.	
6,832	6,733	98.6%	

#### Subyearling fall chinook migration year 1997

(includes 607 smolts partially outmigrating in 1998)

category	smolts	adults	SAR
C0	4,453	21	0.47%
C1	37,754	55	0.15%
Т	2,831	4	0.14%
LGR pop.	category#	%categorie	s in pop.
45,803	45,038	98.3	3%

# Subyearling fall chinook migration year 2001 (only jacks and 2-salt available, approx 50% of return)

(includes 247 smolts partially outmigrating in 2002)

category	smolts	adults	SAR
C0	2,737	59	2.16%
C1	11,992	40	0.33%
Т	30,596	57	0.19%
LGR pop.	category#	%categories in pop.	
45,621	45,325	99.	4%

#### Subyearling fall chinook migration year 1998

(includes 490 smolts partially outmigrating in 1999)

category	smolts	adults	SAR
C0	3,270	31	0.95%
C1	44,801	83	0.19%
T	2,174	9	0.41%
LGR pop.	category#	%categories in pop.	
50,400	50,245	99.7	%

# Legend for categories (CJS survival estimates are used to convert smolt numbers to LGR equivalents)

C0	Undetected at 4 transport sites, but surviving to MCN tailrace
C1	Detected at one or more of 4 transport sites
Т	Transported at one of 4 transport sites regardless of prior detection upstream

Table 2. Smolt-to-adult survival rates (SARs) for fall chinook completely holding over to migrate as yearlings for PIT tagged hatchery and wild subyearling fall chinook released in the mainstem Snake and Clearwater rivers above Lewiston, Idaho, within two categories of outmigration status.

## Migration year 1995 fall chinook completely outmigrating in 1996 (66 smolts detected)

category	smolts	adults	SAR
С	54	0	0.0%
T	12	0	0.0%

# Migration year 1996 fall chinook completely outmigrating in 1997 (436 smolts detected)

category	smolts	adults	SAR
С	375	5	1.3%
T	61	1	1.6%

# Migration year 1997 fall chinook completely outmigrating in 1998 (814 smolts detected)

category	smolts	adults	SAR
С	733	9	1.2%
T	81	0	0.0%

# Migration year 1998 fall chinook completely outmigrating in 1999 (862 smolts detected)

category	smolts	adults	SAR
С	817	27	3.3%
T	45	2	4.4%

Migration year 1999 fall chinook had no outmigrants detected in 2000 due to detection of old 400 kHz PIT tags.

Migration year 2000 fall chinook completely outmigrating in 2001 (504 smolts detected)

category	smolts	adults	SAR
С	467	8	1.7%
Т	37	0	0.0%

Migration year 2001 fall chinook completely outmigrating in 2002 (1,049 smolts detected) (only jacks and 2-salt available, approx 50% of return)

category	smolts	adults	SAR
С	1,017	48	4.7%
T	32	2	6.3%

Legend for categories (no survival estimates available to convert smolt numbers of fish totally outmigrating as yearlings to LGR equivalents as subyearlings)

С	Detected at any of 7 dams with PIT tag detection capability totally in the year following the migration year	
Т	Transported at one of 4 transport sites regardless of prior detection upstream in the year following the migration year	

Table 3. Smolt-to-adult survival rates (SARs) from McNary-to-Bonneville Dam for subyearling fall chinook PIT tagged and released from McNary Dam within two categories of outmigration status.

#### Subyearling fall chinook migration year 1999

(tagged fish released for gatewell or tailrace location)

Category	smolts	adults	SAR
С	45,880	83	0.18%
T	2,224	2	0.09%

#### Subyearling fall chinook migration year 2000

(tagged fish released for gatewell or tailrace location)

(tagged non reit	made recallery		
category	smolts	adults	SAR
С	48,862	257	0.53%
T	608	0	0.00%

#### Subyearling fall chinook migration year 2001

(tagged fish released for barge or river location)

(only jacks and 2-salt available, approx 50% of return)

category	smolts	adults	SAR
С	38,594	29	0.08%
T	23,196	18	0.08%

Legend for categories

		cild for datageries			
C McNary tailrace or river routed PIT tagged smolts					
	Т	Gatewell fish detected on raceway/sample room routes on transportation days or fish routed to barge routed and not subsequently detected at a downstream dam			

# The importance of spill for fish passage in August Fall chinook adult returns, migration timing as juveniles

Most of the analyses that have been conducted to date exploring the impact of eliminating spill in July and August have been based on a single set of conditions in the SIMPAS model using point estimates of juvenile data and average juvenile passage distribution data. We considered the available empirical data. We reviewed all of the adult PIT tagged fall chinook that were detected in the hydrosystem as juveniles and determined when they were observed in the hydrosystem as juveniles. This was done in order to understand the importance of spill for fish passage in August at Ice Harbor and in the Lower Columbia River.

The following tables show the proportion of adult PIT tagged fall chinook returns, which passed McNary and Lower Granite Dam in August versus July as juveniles. These tables show that a significant proportion of returning adults may pass the projects in August. In addition, with an average 15-day travel time from Lower Granite to Ice Harbor, the returning adult, juvenile data indicates that a large proportion of Snake River juvenile fall chinook that survive to adult pass through the lower Columbia River in August.

The adult data raises serious questions about the reliance upon the SIMPAS juvenile model analysis to predict impacts of changing summer spill for fish passage from the BiOp operations when the empirical data seems to suggest a more dramatic potential effect of terminating spill.

Table 4. Juvenile Passage Timing, at Lower Granite Dam of PIT tagged fall chinook, which survived to return as adults (see separately attached plots)

Year Juvenile				
Migration	Transported 6/20-7/31	Transported 8/1-8/31	In-River 6/20-7/31	In-River 8/1-8/31
1995	16.67%	16.67%	16.67%	36.67%
1996	0.00%	50.00%	12.20%	43.90%
1997	50.00%	0.00%	45.95%	21.62%
1998	80.00%	0.00%	38.00%	28.00%
1999	26.32%	68.42%	30.98%	26.63%
2000	0.00%	33.33%	39.13%	21.74%
2001	33.33%	17.95%	44.83%	31.03%

Table 5. Juvenile Passage Timing, at McNary Dam of PIT tagged fall chinook, which survived to return as adults (see separately attached plots)

Year Juvenile				
Migration	Transported 7/1-7/31	Transported 8/1-8/31	In-River 7/1-7/31	In-River 8/1-8/31
1995	0.00%	0.00%	10.53%	10.53%
1996	0.00%	0.00%	0.00%	50.00%
1997	0.00%	0.00%	38.46%	46.15%
1998	0.00%	50.00%	53.85%	46.15%
1999	0.00%	100.00%	17.07%	70.73%
2000	0.00%	0.00%	37.50%	37.50%
2001	50.00%	0.00%	16.67%	16.67%

The above data indicates that a significant proportion of returning adults may pass projects in August as juveniles. From the Table below, it is interesting to note that during years when a high percentage of returning adults passed McNary Dam as juveniles during August, spill and flow levels during August were also high in the Lower Columbia River. For example, in 1999, 70.73% of returning PIT tagged adults passed McNary dam in August as juveniles. Spill during August of 1999 was high across all Lower Columbia Projects (see table below), and McNary spilled throughout all of August. August flows were the highest (on average) between the years of 1995 and 2001 at McNary Dam.

	Bonneville	The Dalles	John Day	McNary	McNary
:	August Spill	August Spill	August Spill	August Spill	August Average
	Volume (Kaf)	Volume (Kaf)	Volume (Kaf)	Volume (Kaf)	Flow (Kcfs)
1995	5059	4670	253	0	138.2
1996	5594	6143	2350	2072	183.3
1997	6563	7621	2533	2862	198.4
1998	5276	4096	2659	317	142.1
1999	5403	7876	3678	3382	208.5
2000	5464	3351	3067	320	140.4
2001	2396	2025	0	0	96.8

#### Flow and passage distribution and predicted impacts

Elimination of summer spill could be especially detrimental to fall chinook during low flow years, when the subyearling migration is shifted later into the summer. Because BPA did not analyze this scenario, their estimated adult impacts would be underestimated. Juvenile fall chinook passage data shows that passage distribution is affected by flow. The agencies and tribes recent comments on the BPA summer spill analysis (State, Federal and Tribal Fishery Agencies Joint Technical Staff Memorandum, 2/20/04) illustrated the shift in passage timing relative to migration flow level. The BPA summer spill analysis using SIMPAS was done only for average flow conditions. However, the SIMPAS predicted impacts of eliminating summer spill will be highly influenced by the passage timing distribution utilized in the analysis. The following analysis utilizing the SIMPAS model incorporates a passage distribution that could be expected based upon historical data under low flow conditions. This illustrates the range of potential adult impacts that could be expected.

#### 1) Reach Survival Estimates Using SIMPAS

Reach	BiOp Operation	No Spill Operation	Difference
IHR to Bon	26.4%	15.9%	12.0%
MCN to Bon	30.0%	19.8%	11.6%
JDA to Bon	44.6%	32.0%	13.0%
Tda to Bon	69.4%	56.2%	14.0%
Bon to Tailrace	82.4%	74.6%	8.2%

In our analysis a 4% increase in pool mortality is assumed. The 2000 BiOp assumed a 5% percent increase in pool survival if the RSW and other aggressive non-breach options were implemented. Therefore if spill, a primary route of passage, is removed it should result in a 4% increase especially under low flow conditions that occur in August. BPA in their SIMPAS analysis assumed 1% at JDA and IHR and 0.5% at Bonn and TDA, and no change at McNary. Other differences are sluiceway guidance at Bonneville Powerhouse II; we used 33% based on radio tag data, while 46% was used by BPA based on hydro acoustic, research results; we decreased survival through the sluiceway when no spill was present from 98% to 96.5%; nighttime spill at Bonneville was set at 125 kcfs in the BPA analysis where as we set it at closer to 145 kcfs; also we used NMFS information of 89% survival fro McNary bypass, BPA used 97%. We also included the assumption that transported fish survival is a constant through both operations. There are small changes in numbers throughout the model depending on which recent reports were used to update parameters.

#### 2) Population Estimates for ESA Listed Fish Only

For estimating impacts to ESA listed fish, we assumed that 1.1 million fish collected at LWG and 50.9% are wild and that the FGE is .534. This results in a starting population at LWG of 1.05 million juveniles.

Using SIMPAS, fish were routed through the collection systems and removed for transportation, resulting in an estimated 8% of the juveniles survival to IHR with a spill operation and 7.0% under a no spill operation. This results in an estimated population between 83,535 and 80,713 would be the extreme difference on population respectively, depending on run timing of those fish.

#### 3) Juvenile Run Time Estimate for Snake River Fish

Using migration timing data from the FPC, the range of SARs is 8% to 43%. (Attachment 1) With the assistance of FPC an estimate of between 8% and 25% of fish would still be above Bonneville after August 1. (Also Attachment 1)

#### 4) Overall Impact to ESA Listed Fish

Using the above numbers and assuming an SAR of .1 (Bowes, 2004) the potential range of adult equivalent mortalities is **46** - **192 adults**. A portion of this number are fish that are passed McNary but have not passed Bonneville dam before August 1. BPA did not account for these fish, nor did they account for extra mortality for transported fish. For additional information on SAR assumptions refer to Bowes, 2004. Adult impacts due to fallback through turbines and bypass systems versus fallbacking through spillways have also not been incorporated into this analysis. Assuming that BPA correctly estimated that adult return for listed Snake River Species to be 2396 then a range of 46 to 192 listed adults would equate to a percent of 1.2% to 8% of this population.

Lastly Option C, which is now the federal proposal, includes a spill evaluation at Bonneville Dam of testing 50 kcfs spill 24 hours versus the BiOp operation. This equates to roughly a 1.8% survival reduction for Bonneville passage. No analysis on this impact to inriver migrants has been completed.

Recommended system wide fall chinook life cycle smolt-to-adult return monitoring program.

Our review shows that there is inadequate fall chinook smolt to adult return and life cycle data available to assess recovery and assessment of hydrosystem measures. We have proposed a marking program that encompasses stocks throughout the Columbia Basin. The rationale is to monitor survival rates to assess, protection, recovery, restoration measures.

Our review of the available PIT tag data on fall chinook surviving to adult and review of the juvenile data which was utilized to model predicted impact on adult returns of fall chinook clearly show that a systemwide smolt to adult return life-cycle evaluation program needs to be put into place in 2004. The following is an outline for a proposed fall chinook evaluation.

The evaluation is proposed over a six year time period, evaluating the Biological opinion flow and spill measures against the Bonneville Power Administration no spill measures including no summer spill in the Snake River and no spill for fish passage in August in the lower Columbia River. PIT tagging efforts need to be in place in 2004 to evaluate and monitor the action agencies no summer spill operation for 2004 through 2006. Then, when transmission issues are resolved, implementation of BiOp summer spill and flow measures and, in addition, spill at the Snake River Projects, and at McNary will be evaluated in 2007 through 2009.

#### Objectives:

- Estimates of smolt-to-adult return rates for transported versus in river migrating fall chinook during the action agencies no spill option.
- Estimates of smolt-to-adult return rates for transported versus in-river migrating fall chinook during the BiOp summer flow, spill, with spill at the Snake River projects and McNary Dam, evaluation period.
- Juvenile fall chinook reach survival estimates throughout both periods.
- Juvenile fall chinook passage distribution and passage timing at Snake River and Lower Columbia River projects for both evaluation periods.

Approximate numbers of PIT tagged Chinook Salmon Required to Estimate Juvenile to Adult Survival in the Snake/Columbia River Basin.

PIT tag quotas vary depending on where fishes are released or captured tagged and released in the basin. Normally, the further upstream or distance traveled in the river system will relate to greater mortality by the time it reaches the sampling site. In addition, subyearling chinook are more vulnerable to predation and other factors that tend to reduce juvenile survival through the hydrosystem. Tables are listed below for the different reaches that have hatcheries or wild salmon groups where representative groups of fish could be PIT tagged in the Columbia River basin.

From McNary Dam to Bonneville Dam, marking subyearling fall chinook (URBs) would require that an estimate could be completed at Bonneville Dam where possible. The key elements would be survival as juvenile fish to Bonneville and return as adult fish back to Bonneville Dam. Survival to adult fish would vary by year, but numbers normally be considered from 0.5% to 2% as a base return. Since there is no transportation involved, there is no requirement to achieve a minimum/maximum number of fish going the different routes of passage at a dam. The Bonneville and John Day Dam estimate for detection at the respective

sampling site is set at 28% and 32%. The collection efficiency of the bypass system is simply the (1-spill proportion) times FGE, given the assumption of a 1:1 spill effectiveness.

Marking sites tentatively considered in this section of river are: Umatilla River hatchery and acclimation ponds, Klickitat Hatchery and Little White Salmon Hatchery. For wild subyearling fall chinook, the Deschutes River and John Day River would provide groups to assess survival from the upper end of this Reach to the Bonneville pool release groups.

Table. Estimated Number of PIT tagged fall chinook required to complete SARs for the Individual River basins (McNary Dam to Bonneville Dam Reach)

Hatchery	# Juvenile chin PIT	# Juvenile Chin at
	tagged	Bonneville Dam
Umatilla	35,000	10,500
Thornhollow Pond	35,000	10,500
(Umat)		
Total Umatilla	70,000	21,000
Klickitat	50,000	20,000
Little White Salmon	40,000	20,000
Wild Fall Chinook		
Deschutes R	50,000	20,000
John Day R	Potential mark group	20,300

Note that SARs for the individual groups should equal about 200 adult fish per release area spread among 1 to 4 adult return years. In initial years the Wild fall chinook would be marked to assess migration timing to assure that they arrive at the dams when spill and best passage conditions exist in the hydro-system.

PIT tag quota for two major release groups of subyearling fall chinook from the Mid-Columbia or Hanford Reach have been calculated in past years to achieve detection rates at McNary Dam to achieve transportation/inriver groups of test fish. The hatchery of choice would be Priest Rapids Hatchery with the wild component from Hanford Reach. These groups will provide transport and inriver survival through the hydrosystem.

Table. Estimated number of subyearling fall chinook required to calculate SARS for the individual release groups of hatchery and wild fall chinook in the Mid-Columbia River.

[Priest Rapids and Hanford Reach]

	# of Chin- PIT tagged	# Inriver below McNary Dam	# of Trans. Required
Hatchery Chinook			
Priest Rapids	150,000	43,000	43,000
Wild Chinook			
Hanford Reach	185,000	33,700	52,000

With no transportation required for these two groups, i.e., fish were placed directly back to the river at McNary Dam, about 80,000 fish from each release group (Priest Rapids and Hanford) could be PIT tagged to achieve SARs for the inriver migrants.

Table. Estimated number of subyearling fall chinook required to calculate SARS for the individual release groups of hatchery fall chinook in the Snake River Basin

Recommended offset for elimination of spill

Hatchery	# of Chin-PIT	# Inriver below	# of Trans.
	tagged	LGR Dam	Required
Snake/Clearwater Acclim Ponds	350,000	80,000	32,000

These groups of subyearling fall chinook would be used to evaluate smolt-to-adult survival rates (SARs) for transported and inriver migrants. In addition, this will provide information on inriver survival and timing through the hydrosystem.

CC: FPAC

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#### Attachment 1

McNary Percent passage data is presented in Table 1. Also included is the proportion of fish in transit between McNary and Bonneville dams if spill were shut off either July 15 or August 1. We calculated wild origin subyearling chinook timing based on PIT-tag detections at McNary. Then used an average of 8 days travel time McNary to Bonneville Dam. Looking back at McNary to those fish that passed 8 days prior to the proposed shut off date provided the begin percent passage. Subtracting the begin percent from the end percent (the percent passage on the shutoff date) yielded the percent in transit. To calculate percent in transit between McNary and John Day and John Day and Bonneville I would recommend apportioning half of the in transit percentage to each reach.

Using passage timing of Wild Origin subyearling chinook in the Snake River basin we used Lower Monumental detections to develop passage timing expressed as a percent of all annual detections (excluding holdover fish). We then moved back 3 d at Lower Monumental to extrapolate the data for IHR (Table 2). In other words, a passage percentage of 11% at Ice Harbor on 7/15 would have passed Lower Monumental on 7/12 or 3 days earlier based on assumed 3 day travel time.

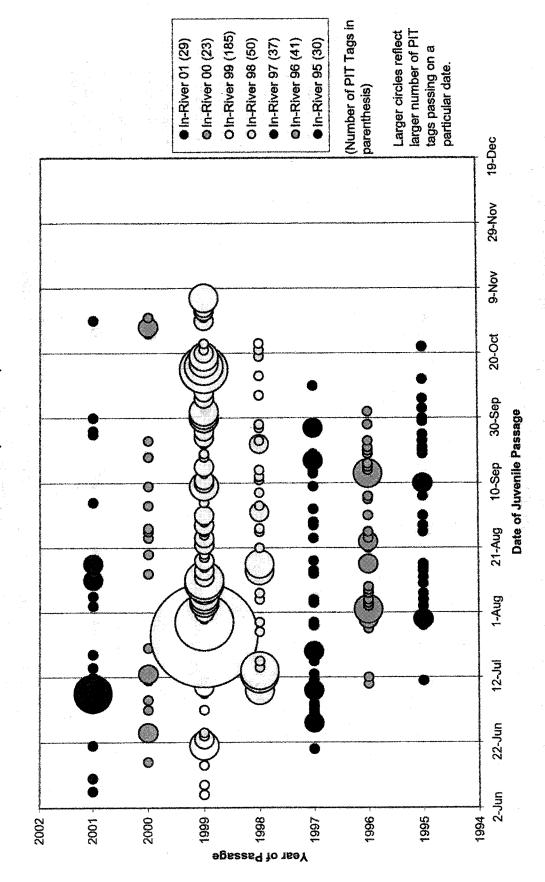
Table 1. Percent of Snake Origin Wild Subyearling chinook affected by End of Spill Operations in Lower Columbia.

	McNary Passage Percent		Percent Pop In Transit (between MCN and BON) at End of Spill	
Date	7/15	8/1	If 7/15	If 8/1
1998	41%	87%	13	25
1999	41%	60%	7	8
2000	79%	92%	13	8
2001	10%	57%	1	23
2002	52%	94%	22	16
2003	56%	85%	10	11

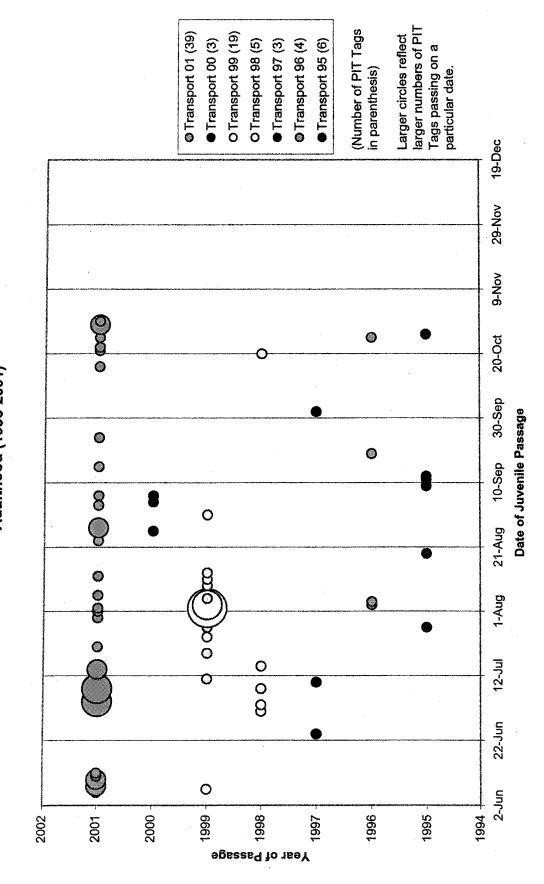
Table 2. Passage Timing at Ice Harbor dams for Wild Subyearling chinook based on 3-day Travel Time from LMN to IHR.

Date	7/15	8/1	
1994	11%	41%	
1995	5%	36%	
1996	16%	53%	
1997	44%	56%	
1998	17%	82%	
1999	47%	69%	
2000	64%	76%	
2001	7%	64%	
2002	30%	89%	
2003	55%	80%	

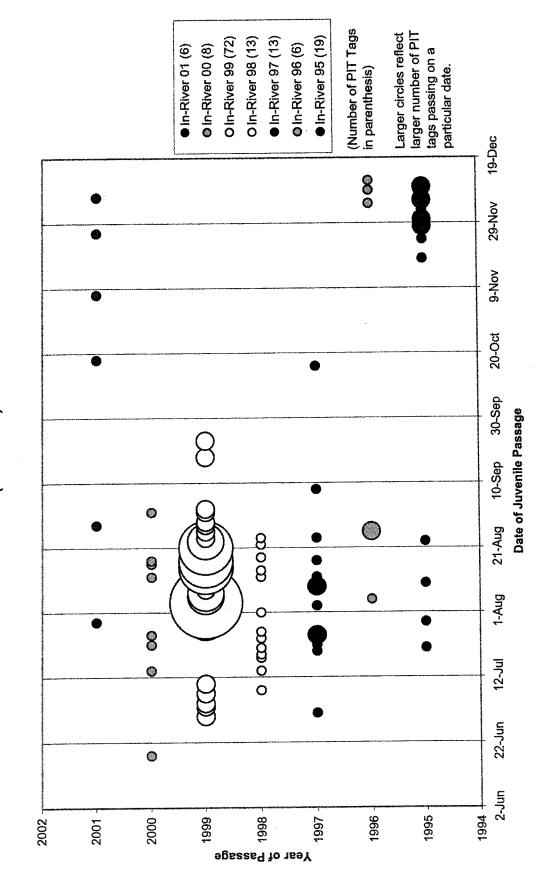
Juvenile Passage Timing at Lower Granite Dam for In-River Fall Chinook that Survived to Adulthood (1995-2001)



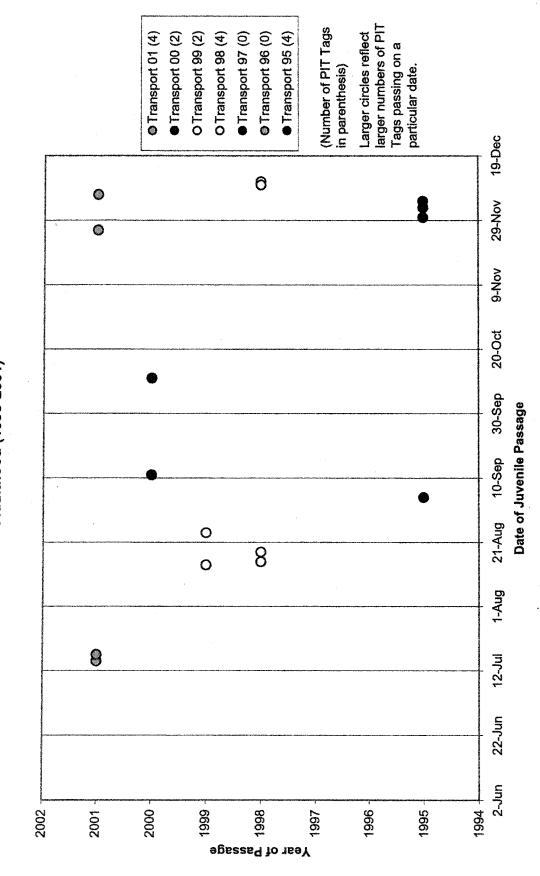
Juvenile Passage Timing at Lower Granite Dam for Transported Fall Chinook that Survived to Adulthood (1995-2001)



Juvenile Passage Timing at McNary Dam for In-River Fall Chinook that Survived to Adulthood (1995-2001)



Juvenile Passage Timing at McNary Dam for Transported Fall Chinook that Survived to Adulthood (1995-2001)





#### City of Cascade Locks Emergency Services

PO Box 308 505 WaNaPa St. Cascade Locks, OR 97014

(541) 374-8510 Fax: (541) 374-8152 TTY 711

April 6, 2004

Mr. Stephen J. Wright Administrator Bonneville Power Administration PO Box 3621 Portland, OR 97208-3621

PO Box 3621
Portland, OR 97208-3621
Brigader General William T. Grisoli
Commander and Division Engineer
U.S. Army Corps of Engineers

PO Box 2870 Portland, OR 97208-2870

Northwest Division

Re: Summer Juvenile Bypass Spill Operations

Bob Lohn NOAA Fisheries Office of Regional Director 7600 Sandpoint Way NE Seattle, WA 98115-0070

#### Gentlemen:

As a member of the Oregon Municipal Electric Utilities Association (OMEU), the City of Cascade Locks supports OMEU's position concerning your March 30 Summer Spill Proposal. We share OMEU's concern about the extraordinary costs to our consumers associated with summer spill. Last summer, summer spill cost BPA ratepayers in the region some \$77 million; in Oregon it came to \$15 million. Our economy has been devastated by the recent recession. Cascade Locks has never recovered. People here sometimes have to choose between paying their electric bill and buying food. Obviously, anything you can do to hold electric prices down is of great concern to us.

The March 30 proposal, while not eliminating this costly practice, does appear to reduce the impact on our consumers by about \$35 million by reducing spill in August. We support the implementation of proposed alternative measures to protect fish such as the enhanced Pikeminnow predator control program and Hanford Reach stranding protection flows. Any additional offsets should be selected based on their cost-effectiveness and achievement of biological benefits. The region cannot afford to do otherwise.

Robert S. Willoughby City Administrator

Cc: Tom O'Connor, OMEU



Hermiston Energy Services 215 E. Gladys Avenue Hermiston, OR 97838 Phone (541) 667-5035 • Fax (541) 567-6731 E-Mail: rdorran@hermiston.or.us

Mr. Stephen J. Wright Administrator Bonneville Power Administ. P.O.Box 3621 Portland, OR 97208-3621

Mr. Robert Lohn NOAA Fisheries Office of Regional Dir. 7600 Sand Point Way NE

Brigadier General William T. Grisoli Commander and Division Engineer U.S. Army Corps of Engineers Northwestern Division

Seattle, WA 98115-00700 P.O. Box 2870

Portland, OR 97208-2870

Dear Administrators Wright and Lohn and Brigadier General Grisoli:

Subject: Summer Spill Program.

I am responding to your invitation for comments relative to BPA's Summer Spill Program outlined in your news release of March30, 2004.

Although we are somewhat disappointed that you did not adopt the "No Spill July-Aug" proposal as submitted to the Northwest Power and Conservation Council on January 21, 2004 that would have saved the electric ratepayers who buy their power from BPA, including the 5,000 customers of Hermiston Energy Services, an estimated \$77 million, we still commend you for your efforts to attempt to address the no spill issue by adopting a three year pilot program that hopefully will produce a savings of \$35 to \$45 million annually.

We feel confident that the proposed three-year pilot plan to adjust spill at certain dams while stepping up measures to protect salmon and steelhead will prove successful and hopefully leading to a more vigorous no spill program as originally proposed.

All of these measures is to hopefully provide some reasonable balance to the huge costs for fish mitigation so that the electric ratepayers of the region can obtain some economic relief which in turn will help in restoring the economic health of the Northwest.

Sincerel

Electric Utility Superintendent

# PRINGFIELD UTILITY BOARD 250 A Street, Springfield, OR 97477



April 6, 2004

Mr. Stephen J. Wright **Administrator Bonneville Power Administration** PO Box 3621 Portland, OR 97208-3621

Proposed Spill Operation Modifications for July and August 2004

#### **Dear Administrator Wright:**

The Springfield Utility Board wishes to support the proposed modifications to your summer spill operations as being logical, common sense and good public policy in balancing the needs of both endangered and non-endangered fish species, and the social-economic requirements of Northwest residents.

There is overwhelming evidence that endangered salmon species are returning in near record-like runs, while at the same time Northwest decision-makers continue to spend massive amounts of public resources to assist returns of a paltry number of additional endangered fish. While these resources are being spent in inefficient ways, we continue to harvest these same salmon and non-threatened fish in large numbers. Our current policies simply make no sense. Therefore, we applaud you for confronting this situation and putting forth the current summer spill modifications.

We believe that after one or two years of demonstration of revised summer flow regimes that the scientific record will show that fish populations will not be harmed and that a substantial economic benefit will accrue to Northwest consumers.

We support reasonable mitigation programs to provide offsets for potential negative impacts on both endangered and non-endangered species. We would caution you, however, to be pragmatic and realistic in your evaluation and adoption of offset programs such that they are efficient and cost effective towards their proposed purpose, i.e., mitigation of fish damage and optimization of fish returns.

News accounts of some of the proposed offset/mitigation programs would indicate that parties in the region who have a vested interest in current fish restoration programs have proposed very extensive and costly offsets.

Some of these programs would appear on the surface to be questionable in their efficiency and in their scope. Certainly the enhanced Pikeminnow program and Hanford Reach "anti-stranding" offset programs are laudable and ones that we support. We believe that there are other offset, mitigation programs that are worthy of federal agency review. These include additional flow augmentation from Dworshak Reservoir and enhancement of the Regional Power Council Fish and Wildlife Program for a three-year test.

To the extent that the region is able to address reductions in commercial harvest (non-tribal), we would strongly support those efforts, as being a direct benefit to adult fish and in conserving the hard-won gains in return of endangered fish stocks.

In closing, we wish to recognize your leadership in providing responsible policy direction on this important matter of regional concern. We fully support the federal agency summer spill modifications.

If you should have any questions on this or if we can be of any assistance, please feel free to call on me.

Yours very truly,

Steve L. Loveland General Manager

cc: Brigadier General William T. Grisoli, U.S. Army Corps of Engineers Bob Lohn, NOAA Fisheries Tom O'Connor, OMEU Shauna McReynolds, PNUCC Shane Scott, PPC

Media Relations - DM7 P.O. Box 3621 Portland, OR 97208-3621

Bonneville Power Administration:

#### Salmon need water.

I am deeply concerned by the BPA's recent announcement to reduce the summer spill program. The bulk of the evidence of the scientific community supports spillway passage for salmonids as important for species survival. Salmon need safe passage to spawning grounds and sea.

According to the National Marine Fisheries Service, "Spillway passage is the preferred passage method for juvenile salmonids...It should be the baseline against which other passage methods are measured. The body of evidence indicates that juvenile survival is generally highest through this passage route ... Therefore, measures that can increase juvenile fish passage over FCRPS project spillways are the highest priority..."

The spill reduction program reveals the highest priority to be profit. BPA ended FY03 with over \$550 million in its financial reserves.

According to a recent analysis by the NW Energy Coalition, BPA's proposal would increase total annual Northwest electricity generation by only 0.69%, while providing roughly less than 0.11 to 0.52 cents per month in rate relief on residential electricity bills.

The suggested 'mitigation' options are equally unsound. "The Hanford Reach mitigation offset proposed by BPA was previously negotiated as a component of the Grant County PUD FERC license renewal agreement. The Hanford Reach offset...cannot be considered an additional measure since it already exists as part of the Grant County settlement." (Agencies and tribes review comments - Bonneville Power Administration Summer Spill Analysis, February 20, 2004)

Additionally, Oregon Dept. of Fish & Wildlife (ODFW) states, "...estimates of the number of salmonids that would be additionally consumed [by predators] if summer spill was reduced could easily reach one million, and would likely not be offset by the relatively small increase in [northern pikeminnow exploitation] assumed in the offset proposal."

If the plan truly "seeks to maintain biological benefits for salmon while reducing overall program costs", why not invest in the development of renewable energy technologies such as wind, solar and geothermal? Solar, wind and geothermal energy are abundant and free.

The BPA speaks much of the monetary value of using the Columbia's waters to generate electricity. What of the intrinsic value of species evolved in the Columbia's waters over millennia? Where is the larger context?

May the salmon survive us.

Tammi Miller 915 SE 33rd Ave

Portland, OR 97214

TH: 509-705-0045 1 TAX. 507-705-4055 WWW.POTAL

552-239

APR 1 2 2004

April 6, 2004

BPA, Communications - DM-7, P.O. Box 14428 Portland, OR 97293-4428

RE: WSPC Comments on Summer Spill Proposal

Dear Sir or Madame;

The Washington State Potato Commission (WSPC) submits the following comments in support of the Bonneville Power Administration (BPA) and U.S Army Corps of Engineer's (Corps) (collectively, the "federal agencies") proposal to modify the Federal Columbia River Power System's (FCRPS) summer juvenile bypass spill operations.

The WSPC is a quasi state agency dedicated to the advancement of potato farming in Washington State. The WSPC works with approximately 350 potato growers throughout Washington. Potatoes are the second largest crop grown in the state, with an annual farmgate value of approximately \$500 million. Washington State accounts for nearly one-third of all potatoes and potato products exported from the U.S., totaling nearly \$500 million in exports from the Ports of Seattle, Portland, and Tacoma in 2003 alone.

A recent study of the economic impacts of the Washington State potato industry show that potato farming and related processing contributes \$3.01 billion annually to the Washington economy. (David Holland & Hun Ho Yeo, The Economic Impact of the Potato Industry in Washington State, 1997). This translates into nearly 28,000 jobs. As the Columbia Basin project accounts for nearly 85% of the potatoes grown in Washington State, most of the jobs created by Washington State potato industry reside in the Columbia Basin area. (Id.) This is significant considering that many counties in rural Eastern Washington have some of the highest unemployment rates in the nation. (See U.S. Dep't of Labor, Bureau of Labor Statistics, September 2003, http://www.bls.gov/web/laumstrk.htm.)

Currently the financial health of the Washington potato industry is precarious. During the past five years, selling prices for potatoes have been very low, margins are tight, credit is scarce, and losses are mounting for many Washington potato farmers.

If implemented, this proposal will result in more cost-effective FCRPS operations and will achieve better biological benefits for listed and non-listed salmon. While the WSPC believes that more can, and should be done to improve the cost-effectiveness of the FCRPS operations, this proposal is an appropriate initial step. The WSPC understands that increased revenue through spill reduction will be used to reduce existing electricity rates or avoid future electricity rate increases for BPA ratepayers. As such, the

growers, will be benefited by the outcome of the federal agencies' current proposal. WSPC urges federal agencies to adopt their March 30, 2004 proposal to modify the current spill program.

A. The modifications to the summer spill operations along with the existing offset proposal should achieve similar or better benefits for salmon at less cost than the current summer spill program.

The current summer spill program is wasteful and lacks a scientific justification. Summer spill costs ratepayers \$77 million annually, while saving less than 12 ESA-listed salmon and 20,000 other non-listed salmon (which are subsequently harvested). The \$77 million cost breaks down to \$3 million for each ESA-listed salmon and \$4,000 for each non-listed salmon. It is the most expensive fish mitigation measure used by federal river manager. With or without offsets, the summer spill program must be eliminated.

Notwithstanding, WSPC supports the federal agencies' March 30, 2004 proposal. The WSPC sees this proposal as an initial step towards the elimination of summer spill. Even though WSPC supports this proposal, WSPC has three comments concerning about the federal agencies' technical analysis and the federal agencies' plan to develop additional costly offsets.

First, according to the federal agencies' March 30, 2004 proposal, the goal for the proposed summer spill operation is to achieve similar or better biological benefits for both listed and non-listed salmon at less cost than the current summer spill program. The federal agencies have failed to provide a scientific justification for setting such a demanding equivalency goal. Indeed, such a demanding goal defies common sense when the impacts of the proposed modifications to the summer spill operations are not biologically significant and in light of the fact that the 2000, 2001, 2002, and 2003 adult salmon runs are among the largest fish returns on the Columbia River system since dam counts began in 1938. This goal is especially absurd when applied to non-ESA listed fall Chinook, which are later harvested at a rate of over 50 percent.

Instead, WSPC believes that the appropriate standard should be whether the spill proposal has any significant biological impact on the salmon population as a whole. The current proposal does not include any analysis as to whether these impacts from the spill modification (without any offsets) are biologically significant to any of the affected salmon populations. For example, in regards to ESA-listed Snake River Fall Chinook, the federal agencies anticipate a reduction of between 2 to 20 ESA-listed Snake River Fall Chinook out of an overall adult return of approximately 2,500 fish. For non-listed Chinook, the federal agencies anticipate a reduction of approximately 12,000 other Chinook salmon out of an overall adult return of approximately 380,000 fish. As previously mentioned, these non-listed fall Chinook are harvested at a 50 percent harvest rate. These impacts do not appear to be biologically significant to any of the affected salmon populations.

Washington, the WSPC and its members have direct interest in the federal agencies efforts to make FCRPS operations cost effective. Due to its reliance on electricity-dependant irrigation and processing companies, potato growers have an interest in maintaining stable electricity prices. Recent BPA rate increases have placed a severe strain on Washington farmers at a time of historically narrow profit margins.

Increasing power rates affect farmers through the increased cost of irrigation, as well as the electric power supply requirements for growers and producers. This is especially an issue for potato farmers because most of the crop is irrigated. In 1998, the USDA Farm and Ranch Irrigation Survey identified 322 potato farms irrigating 149,721 acres. Farmers pay almost \$40.00 per acre on energy for irrigation, (\$49 million/year) with 98.7 percent of the amount for electricity. The trend toward higher electricity costs threatens the viability of several irrigation districts, especially in north-central Washington. Many agricultural growers, unable to get credit or sell at a profit are in arrears in payment to the districts or have defaulted. The costs of maintaining the irrigation district then falls on fewer and fewer members, threatening collapse of the district.

The cost of electricity is even more critical to the food-processing phase. Many processing companies are located in Washington due to the low energy and water costs which offset the costs of transportation to national and international markets. Food processing has become a huge industry and employer. In fact, Washington State is the No. 1 producer of frozen fries in North America, producing nearly 40% of the fries on the continent. For calendar year 2000, gross sales from food processing in Washington was \$8.9 billion—\$2.2 billion alone in freezing and drying of fruit, vegetables, and seafood, and \$1.2 billion for dairy processing. For crops such as sweet corn, carrots, peas and potatoes, as much as 90 percent of the crop is processed. An estimated 30-40 percent of the cost of processing and freezing is for energy. The farmers' and food processors' economic health is closely tied together. If processing companies react to the increased energy costs by decreasing their production, or moving out of state, then growers will have a limited market for their products. Likewise, if there is a significant decrease in the number of growers or the amount of production, it could become a significant problem for processors who rely on the production to keep plants operating.

<sup>1</sup> U.S. DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURAL STATISTICS SERVICE & WASHINGTON AGRICULTURAL STATISTICS SERVICE, WASHINGTON AGRICULTURAL STATISTICS 2003 28 (2003), available at http://www.nass.usda.gov/wa/annual03/annual03.pdf [hereinafter AGRICULTURAL STATISTICS 2003].

<sup>2</sup> WILLIAM E. BROOKRESON, DEPUTY DIRECTOR & LINDA CRERAR, POLICY ASSISTANT TO THE DIRECTOR, WASHINGTON STATE DEPARTMENT OF AGRICULTURE, IMPACT OF THE 2001 DROUGHT ON WASHINGTON AGRICULTURE 3 (2001), available at http://www.ybsa.org/wdoa\_report.htm [hereinafter Brookreson & Crerar].

<sup>3</sup> Id. at 3.